



CITY OF KIRKLAND
Information Technology Department
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www.ci.kirkland.wa.us

MEMORANDUM

To: David Ramsay, City Manager

From: Brenda Cooper, CIO

Date: September 19, 2006

Subject: Information Technology Strategic Plan

RECOMMENDATION

We've provided Council with the final discussion draft of the Information Technology Strategic Plan. You may remember being interviewed by CH2MHILL staff early in the process, and we hope that we have addressed the ideas and issues that you brought up in those interviews. Because technology is one of the strategic tools available to you, we'd like to hear Council's impressions and ideas regarding the plan before we produce the final product.

POLICY IMPLICATIONS

None at this time. We did ask the consultants to do their best to keep projects and recommendations within the resources available to IT. They did a reasonable job of that, but did identify some needs that are over and above what we have otherwise available. We recognize that the fiscal situation is tight, and are not asking for any form of blanket funding for this plan. Each project and/or resource request will go through the normal budget processes for operational and capital funding and can thus be considered by you in light of overall priorities. Some of these projects are already funded through the CIP process.

BACKGROUND DISCUSSION

The Information Technology Department completed its first strategic plan in 2001, and has now completed or started almost all of the recommendations included in that plan. This plan is designed to guide IT investment in the next five years, including specific guidelines for the next two years and more general strategic direction for the following three years. Note that we completed a GIS plan last year, and so what you see before you does not include any GIS projects except for one which expanded in scope as a result of this planning process. We hope to complete a strategic plan in 2010 that addresses GIS and IT together so that we can more clearly display the relationships between GIS and other technology projects and funding.

FINAL DISCUSSION DRAFT



**City of Kirkland
Information Technology Strategic Plan**

September 2006

Prepared by

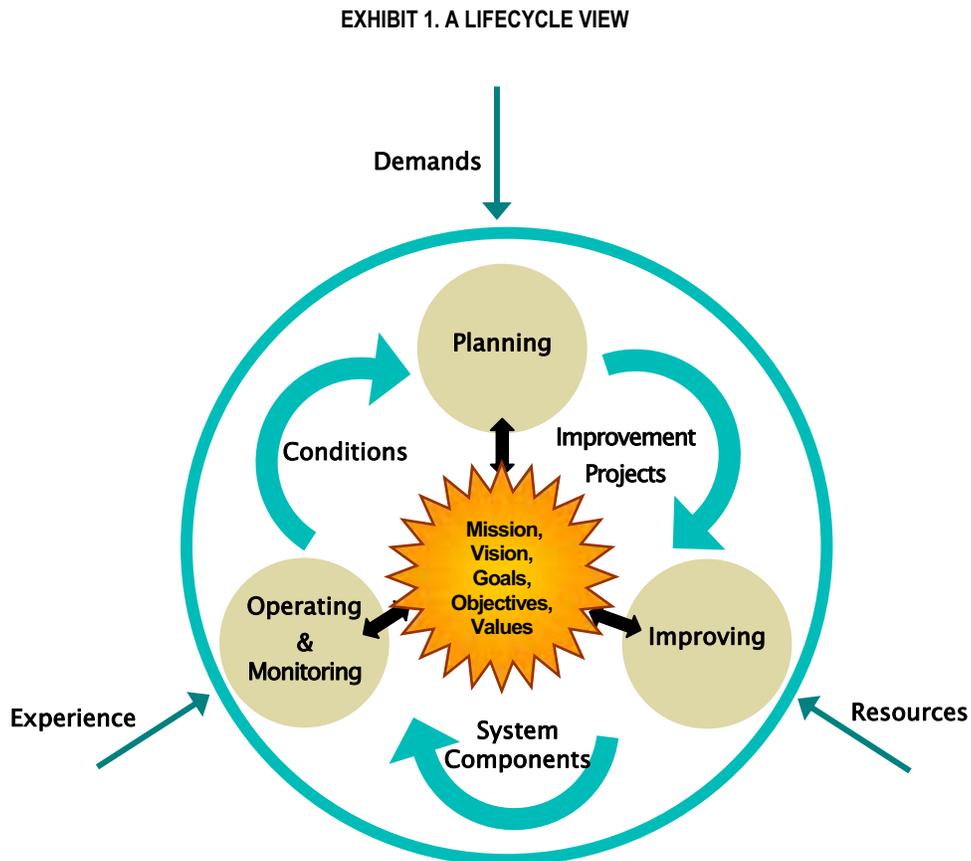


1. EXECUTIVE SUMMARY

1.1 Background

Kirkland has long been admired for its spectacular waterfront, lively downtown, appealing neighborhoods, dynamic arts scene, and highly rated schools. As the city grows – through organic growth and annexation – so does the need for municipal services such as law enforcement and courts, permitting, public outreach and communication, as well as infrastructure planning, design, construction, and maintenance. One of the threads running through all of these areas is information technology (IT), which has a tremendous impact on an enterprise such as the City of Kirkland.

Wanting to more effectively provide service to its customers and better align itself with the Kirkland’s goals and plans for growth, the City’s IT department embarked on a comprehensive strategic planning process. This resulting report documents the planning approach and recommendations for moving forward. Exhibit 1 illustrates the IT enterprise planning lifecycle. With the changes and investments on the horizon for the City, planning at this time is advantageous.



1.2 Overview

The ultimate purpose of an IT strategic plan is to determine how IT should be used in support of an enterprise's mission, vision, goals, and objectives. Other benefits of the IT strategic planning process include establishing a path forward and priorities for the use of IT at the City and creating an organization-wide understanding of IT challenges and initiatives.

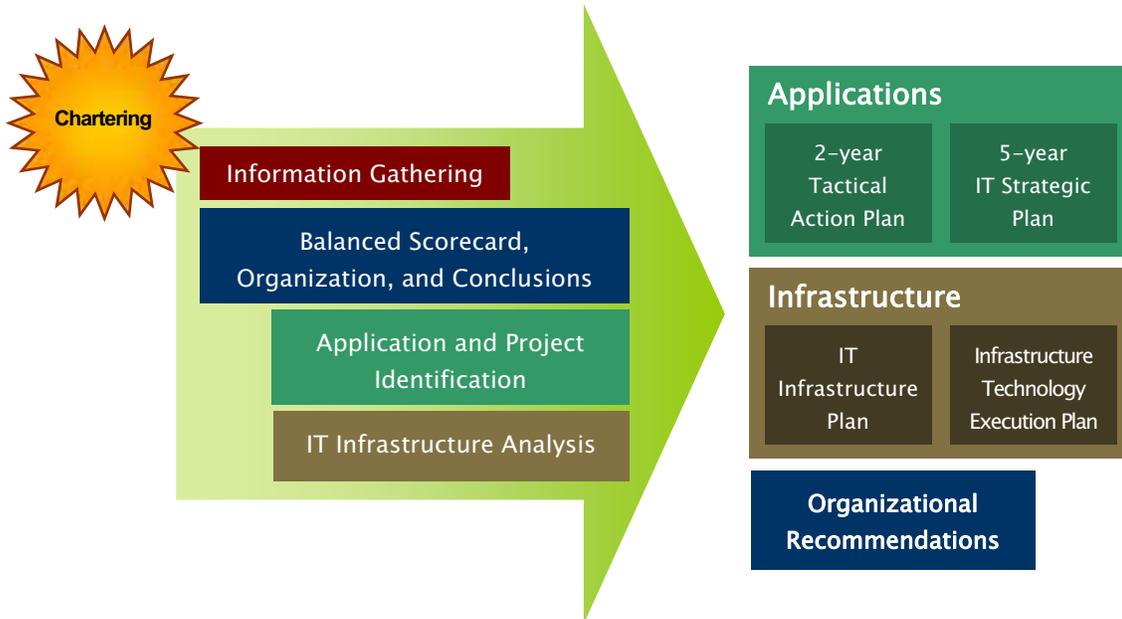
The current state of IT within the City of Kirkland is one of quality, innovation, and efficiency. Customer surveys consistently provide high marks for service. The City's collaboration with regional partners to deliver innovative public service applications is award-winning and is the leading national model. Successful strategies and prudent management have enabled the City to enjoy high levels of IT service with relatively low staffing levels.

A staff of 18.25 FTEs and four one-time-funded staff provide centralized support for about 500 customers. Their services include support for all major applications such as finance, HR, police CAD and RMS, utility infrastructure inventory and work orders, permitting, internet and intranet sites, and project management and reporting. Additionally, IT provides support for desktop PCs and network printers, all IT network and infrastructure, a training program, a full enterprise GIS program, Multimedia Services, regional applications, and support to other cities.

The City's previous Strategic Information Plan, released in July 2001, examined service delivery, applications, IT decision making, and technical infrastructure. The plan resulted in a number of recommendations that the department implemented, or are in the process of implementing, during its 2001 to 2005 horizon.

Facing the end of the plan's life, the City underwent a subsequent 2006 strategic planning process to rechart its course and set priorities for the next five years. Through information gathering and interviews with a wide range of staff and users; an analysis of its Application, Project, and IT Infrastructure needs; and the use of a Balanced Scorecard approach, the strategic planning team identified and prioritized dozens of projects for implementation in a two-year and five-year horizon. Exhibit 2 illustrates the major activities undertaken as part of this effort and their correlation to each other. The GIS Strategic Plan (completed in 2005) and this IT Strategic Plan are complementary documents. Recommendations relating to GIS are not explicitly described in this Plan except in cases where the scope of a recommended project is changed or a project recommendation has been added.

EXHIBIT 2. APPROACH OVERVIEW

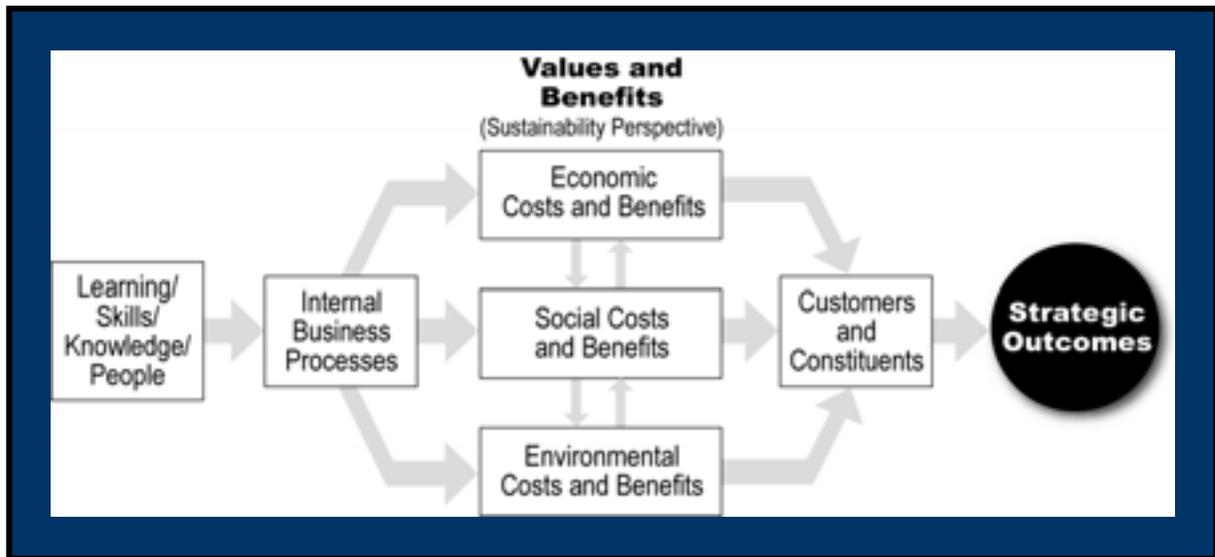


1.3 Findings and Recommendations

The City of Kirkland relies heavily on technology which allows the City to run lean while delivering high levels of service to the community. The City's intensity of IT utilization has resulted in a relatively high number of applications and large infrastructure capacity requirements. Current efforts will add applications to the City's portfolio, but will also more fully utilize other existing applications, providing broader support across the City of Kirkland enterprise. While the IT department at Kirkland is clearly on the right track, there are a number of projects and recommendations to consider that will help the City maintain its leading position in the utilization of information technology and to better prepare itself for disaster recovery.

A primary objective of the IT Strategic Planning project was to ensure that the information technology project ranking and selection criteria considered Kirkland's unique organization and organizational objectives. In order to achieve this, CH2M HILL used a framework based on our adaptation of the Balanced Scorecard (BSC) Approach to consider Triple Bottom Line (Economic, Social, and Environmental) conditions and benefits for the City. The general framework is provided below in Exhibit 3.

EXHIBIT 3. TRIPLE BOTTOM LINE BALANCED SCORECARD



In order to extract strategic themes for Kirkland, the City Manager, Assistant City Manager, all Department Directors, and nearly all of the City Council members were interviewed. A surprisingly consistent set of themes and priorities emerged from these discussions. They are listed below as key criteria for project evaluation.

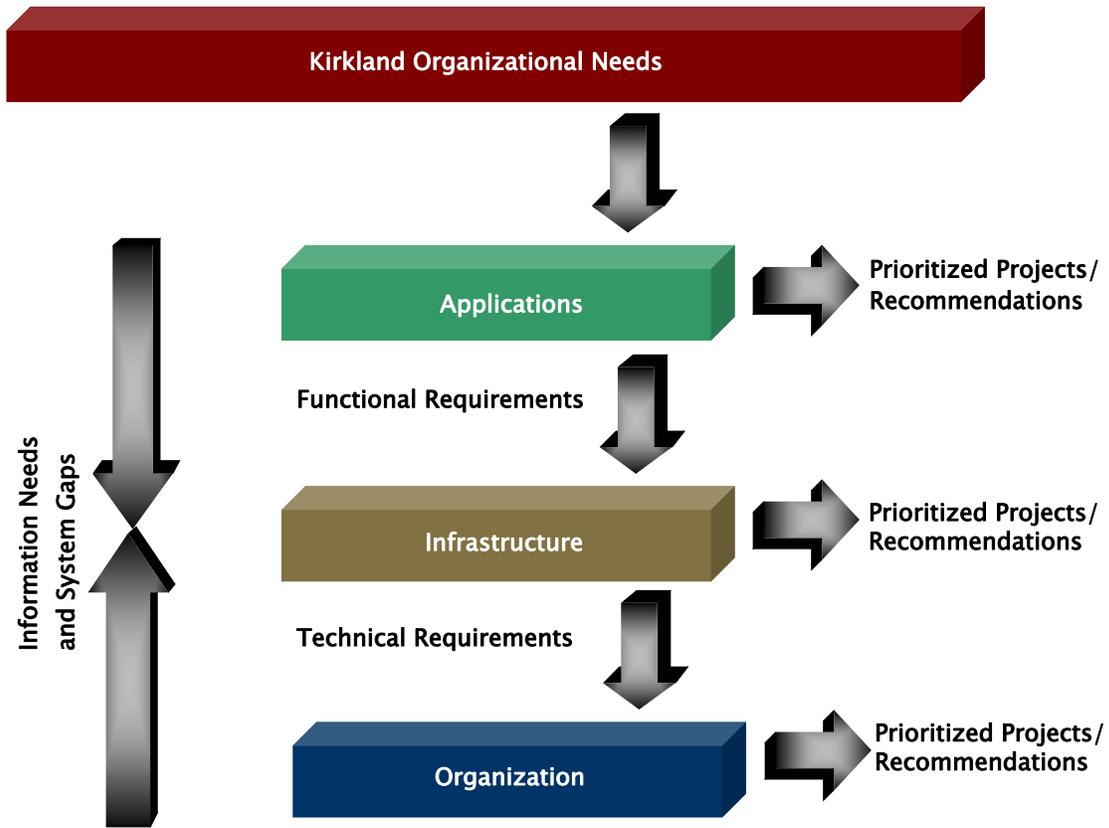
1. Increasing density while preserving Kirkland's character and sense of place
2. Doing more with less (efficiency and effectiveness)
3. Improve the effectiveness of communications with citizens
4. Implement systems as driven by state requirements or standardization between cities

The framework is one of a number of methods we used to prioritize opportunities. We consider it a tool to create a common understanding and consensus among the team on the prioritization criteria and establish a process for objectively ranking the opportunities. Other factors affected how we put together the implementation plan, including existing plans and schedules, logistics and expectations within City of Kirkland, and potential dependencies between opportunities that could affect the timing for initiation.

The process of identifying candidate projects and recommendations took both a top-down view to ensure that City priorities are reflected in the recommendations, and a bottom-up view to ensure that all technical gaps and opportunities were identified (see Exhibit 4).

The resulting recommendations (see Exhibit 5 for a selected summary) are categorized by whether the primary focus relates to organization (including staffing, policy and governance), applications (including database and regional efforts), or infrastructure (network and server resources).

EXHIBIT 4. RECOMMENDATIONS AREAS



The following table (Exhibit 5) lists recommendations that are provided to illustrate highlights of those contained in the Strategic Plan. The final project list has been filtered down from a list of well over 100 candidate projects. The final project list is comprised of 64 projects that have been prioritized and programmed for implementation within the next 5 years; a few have been placed on hold indefinitely. All of the projects represent significant efforts that have either a department or enterprise impact.

EXHIBIT 5. RECOMMENDATIONS SUMMARY

APPLICATIONS	
Implement an Electronic Document Management System (EDMS)	<i>Continue the procurement process and prepare for implementation. Execute a Discovery/Planning project to review and document key use cases associated with that function across the enterprise. Encourage a review of existing processes, and potential re-engineering based on the outcome. Deliver prioritized list of use cases for implementation - the document management roadmap - with target implementation dates.</i>
Develop a Virtual Kirkland GeoSpatial Model	<i>Create a virtual model of the city, or parts of the city, using digital terrain models, building footprints, tree inventory, building textures, window treatments, sidewalks, and other layers to demonstrate how a development (e.g., a new commercial or office building) or policy (e.g., Zoning Code, Comprehensive Plan, etc.) will visually impact the city. This may also incorporate the ability to show changes over time.</i>
Analyze recruitment process and implement an online application solution	<i>Improve and automate the process for attracting and hiring quality staff, including leveraging our regional relationships to provide a regional applicant portal. This project will be pursued jointly with regional partners and executed in two phases. Phase I will analyze areas for improvement and how technology can assist with process automation. Phase II will implement an Application Online solution based on the results of Phase I.</i>
Streamline permit process workflow	<i>Perform detailed review of all permitting processes, workflow, and roles and responsibilities. This work will prepare the City to scale its permitting function to accommodate new demand post-annexation. In addition, the permit process workflow will provide guidance to the EDMS project to ensure that the system is aligned to effectively support permitting.</i>
Receivables	<i>Document the Accounts Receivable process for each department that currently deals with receivables. Define requirements for an Accounts Receivable system. Implement a centralized AR system (potentially Springbrook) with refined AR processes. Provide automated posting to IFAS.</i>
e-Gov	<i>NWMaps is designed to be an online GIS mapping resource available to the public both for Kirkland-specific information and to provide regional GIS data from multiple entities into a seamless whole for specific data layers. NWProperty.net is a regional property locator services. The eCityGov Alliance Operations and Executive Boards manage the work plan for the system which facilitates decision-making for</i>

	<p><i>businesses looking to relocate to or within Kirkland and other eCityGov alliance members. .</i></p> <p><i>MyParksandRecreation.com is a single online source for regional information about parks and recreation opportunities. The website allows citizens to search and find availability of classes across the region, connect to City sites to register for recreation classes. Particular work this year is to integrate parks, facilities, and trails information for the region with search functionality and GIS component</i></p>
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<p>Mobilize Remote Workforce</p>	<p><i>Develop a city-wide mobile strategy. For example, to what extent to we want to provide mobile systems, and how we will maintain connectivity? There are currently funded in-flight mobility projects to provide GIS connectivity in the field and for field inspectors in public works and building. The City already provides mobility solutions for Police and Fire (Fire's are managed by the City of Bellevue, who also dispatches Fire). This project is to define the strategy for current, funded, and unfunded wireless mobility needs. Unfunded mobility projects include providing photographic and complaints data to code enforcement officers via mobile technology, Mobile fire inspections, and field time entry for Public Works & Parks crews. The strategy should include functions to automate, tools for automation, wireless infrastructure, estimated costs for implementation and support, and ongoing governance strategies designed to encourage technical flexibility.</i></p>
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INFRASTRUCTURE

<p>Implement a storage area network</p>	<p><i>Install a Storage Area Network (SAN) attached to key servers based on application storage requirements. The system will give the City a flexible central pool of data storage space that can be allocated to applications as needed.</i></p>
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<p>Perform server virtualization</p>	<p><i>Perform server virtualization to reduce the physical footprint of the servers in use (reducing electricity and cooling load), and allow the City to maintain a comprehensive testing environment, potentially reducing the number of outages due to change issues.</i></p>
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<p>Improve network redundancy</p>	<p><i>Consider entering into an agreement with the City of Bellevue to use the fiber connection between the two cities and share connections to King County as a back-up link in the event of an outage. The City of Kirkland recently established multiple pairs of fiber cable between Kirkland City Hall and the City of Bellevue's new data center. The city should also evaluate the redundancy of its phone system.</i></p>
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Implement automated system monitoring	<i>The City IT department's current process uses a lengthy daily checklist to verify that infrastructure services are working correctly and to identify potential issues. It is a time consuming process and can benefit from automation. Select and implement automated system monitoring tools on critical City systems. There are a number of commercially available tools that can be easily implemented, would significantly reduce the time required to perform the daily checklist, and provide a real time view into the health of the infrastructure.</i>
Address disaster recovery needs	<i>Implement back-up and recovery hardware infrastructure and redundancy of various City systems. Also utilize neighboring City of Bellevue data center to store backup systems and Bellevue's connection to other agency networks to ensure connectivity during emergencies.</i>

ORGANIZATION

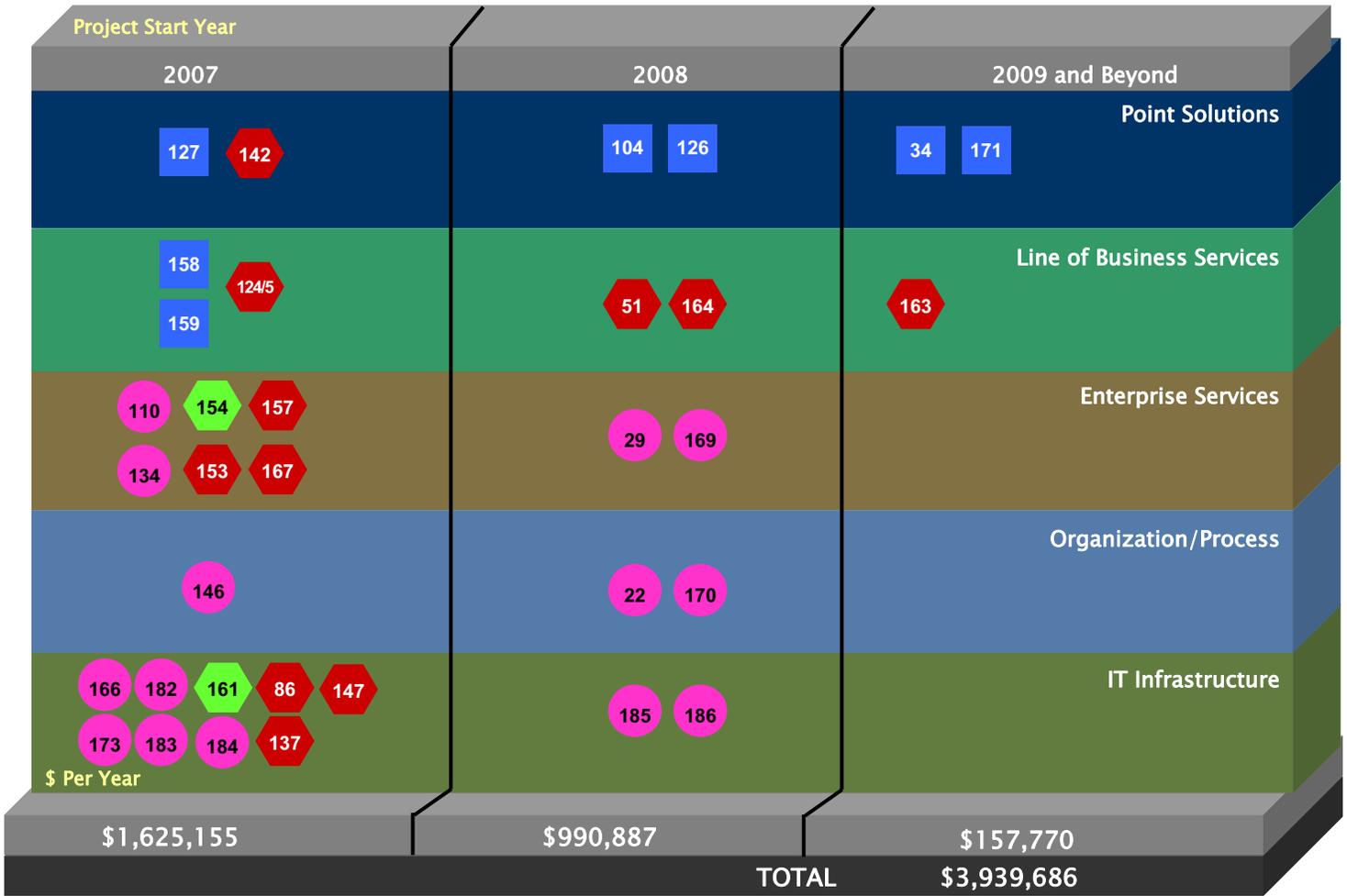
Continue approach to regionalization and establish a strategic, rational process for regional project planning and selection	<i>Work with regional partners to develop a set of criteria to select projects for consideration. Convene an annual coordination meeting between key regional representatives to share annual programs, priorities, and identify synergies. Regional decision-makers should involve appropriate representation in project selection discussions. These should be individuals that can speak to implementation challenges.</i>
Introduce the role of Public Information Officer (PIO)	<i>Add a PIO reporting to the City Manager's Office (CMO). Tools and technology to support the PIO should reside in IT. The PIO will be point for cross-departmental coordination on critical external communications, branding, media relationships, and emergency communications.</i>
Introduce the role of Application Team Manager	<i>Add a full-time application team manager responsible for workload leveling, prioritization, issue escalation, and project performance monitoring. The application team manager will be able to relieve the project management workload which will exceed existing staff capacity over the duration of the plan.</i>
Implement a project governance body or IT Project Management Organization (PMO)	<i>Implement a virtual project management organization to develop project management best practices and delivery standards. A virtual project management organization (PMO) is one where critical project delivery roles are primarily distributed amongst existing staff resources. The IT PMO will provide monitoring and review of projects for quality and also provide project portfolio management and prioritization. It is recommended that the proposed Application Team Manager position chair the PMO and develop an implementation plan. The implementation plan should</i>

	<p><i>take a phased approach that defines the PMO components (i.e. standards and best practices) and defines plans for training and resource assignment. it is further recommended that the PMO functions be piloted on major projects and focus on the most challenging aspects of project delivery as currently experienced by City of Kirkland IT, which are scheduling and resource leveling.</i></p>
<p>Continue to add staff as appropriate and as resources allow</p>	<p><i>Identify and address other staffing gaps such as those currently filled by one-time funded staff and those posed by future growth plans. The City should request ongoing City funding for its four one-time funded staff who are not currently built into the City's base budget and whose workloads are not anticipated to diminish. Other current staffing needs have been identified as a GIS specialist (see GIS Strategic Plan), network specialist, and an intern. As the City grows – in physical size through annexation and in associated staffing and infrastructure – the IT department should continue to assess its customers' growing needs and add staff as appropriate to help support the City's ability to run efficiently.</i></p>

1.4 Impacts and Plan Forward

The IT department is currently resource constrained in its capacity to lead projects. All of the systems administrators are committed to significant maintenance activities and daily support for current systems. Availability of key staff for projects currently ranges from 25 percent to 50 percent, with many already committed to long-term projects. Adding an applications manager will take responsibility for a portion of the project management workload and help ensure that all projects are delivered efficiently. The following plan (see Exhibit 6) illustrates the initial implementation plan for the strategic plan project portfolio. The horizontal layers on the graphic depict the scope and focus of the project. Infrastructure projects represent improvements to the technical architecture (hardware and networking) that supports applications for the enterprise. Organization/process projects are improvements to staffing and business practices that improve IT service delivery or ready the organization for new applications. Enterprise Services, Line of Business Services and Point Solutions are new applications or enhancements to existing applications that have increasingly focused scope and benefit (e.g. point solutions address a specific need within a department). This plan will be adjusted as necessary over the next 5 years as priorities change, available resources fluctuate, and new needs emerge.

EXHIBIT 6. PLAN SCHEDULE AND COST SUMMARY BY YEAR AND PROJECT TYPE



Project Key for Exhibit 5

- | | |
|---|---|
| <ul style="list-style-type: none"> ■ 34 Position Management ■ 104 Refine Parks Work Order Process ■ 126 Online citizen incident reporting ■ 127 Pawns Downloads ■ 158 Fire Inspection Implementation ■ 159 In-Car Mapping ■ 171 Online court payments ● 22 Permit Process Mapping ● 29 Receivable Integration ● 65 CRM Project ● 110 Virtual Kirkland Geospatial Model ● 134 Staff Scheduling ● 135 Capital Budgeting Process ● 146 Employee Status Change Process Analysis & Automation ● 166 NWMaps.net ● 169 Electronic archival system for all email ● 170 Standard Reporting Tool ● 173 Disaster Recovery Planning | <ul style="list-style-type: none"> ● 76 Document Management ● 154 IFAS 7i: HR/Finance System Web-based Client ● 161 Mobile Remote Access for Field Operations ● 172 Intranet Upgrade ● 51 Probation Management System ● 86 Software License Tracking ● 124/5 Electronic Ticketing & Accidents ● 136 Internal Affairs ● 137 Digital Voice Recording System ● 142 JBRS ● 147 MyParksandRecreation.com ● 153 MyBuildingPermit.com ● 157 Recruitment Process Analysis & Application Online Implementation ● 163 Hansen Upgrade ● 164 Permit System Replacement ● 165 Norcom Regional Public Safety Technology Study ● 167 NWProperty.net |
|---|---|
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- | | | | |
|------------------|------------------|-----------------|---------------|
| ■ 158 Department | ● 184 Enterprise | ● 161 In Flight | ● 137 Must Do |
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FINAL DISCUSSION DRAFT



**City of Kirkland
Information Technology Strategic Plan**

September 2006

Prepared by



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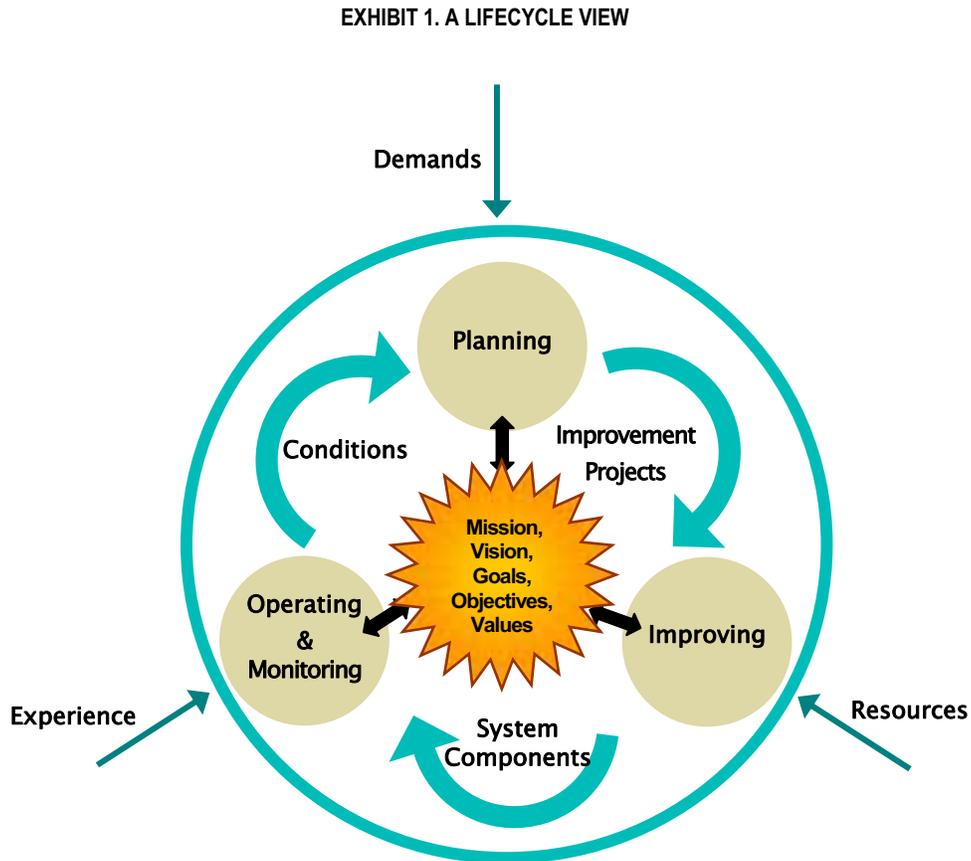
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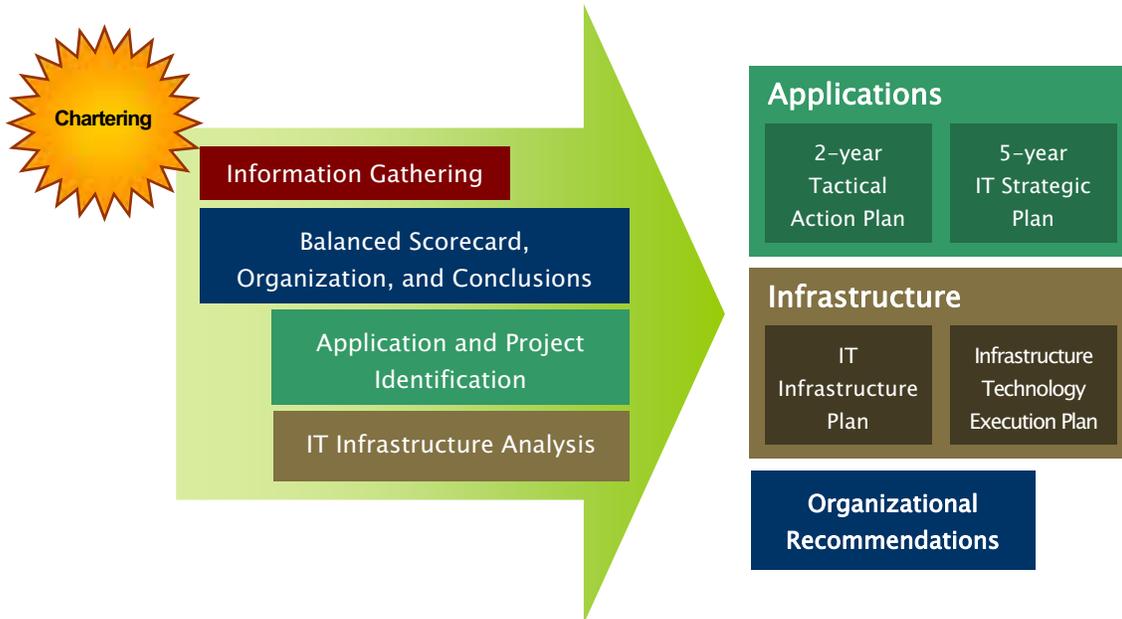
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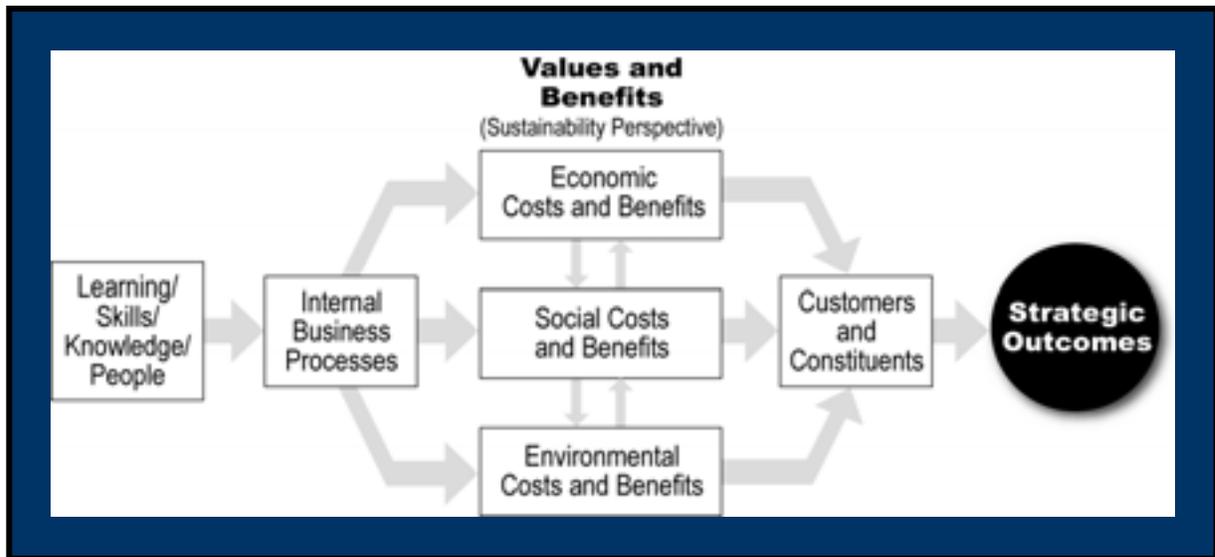


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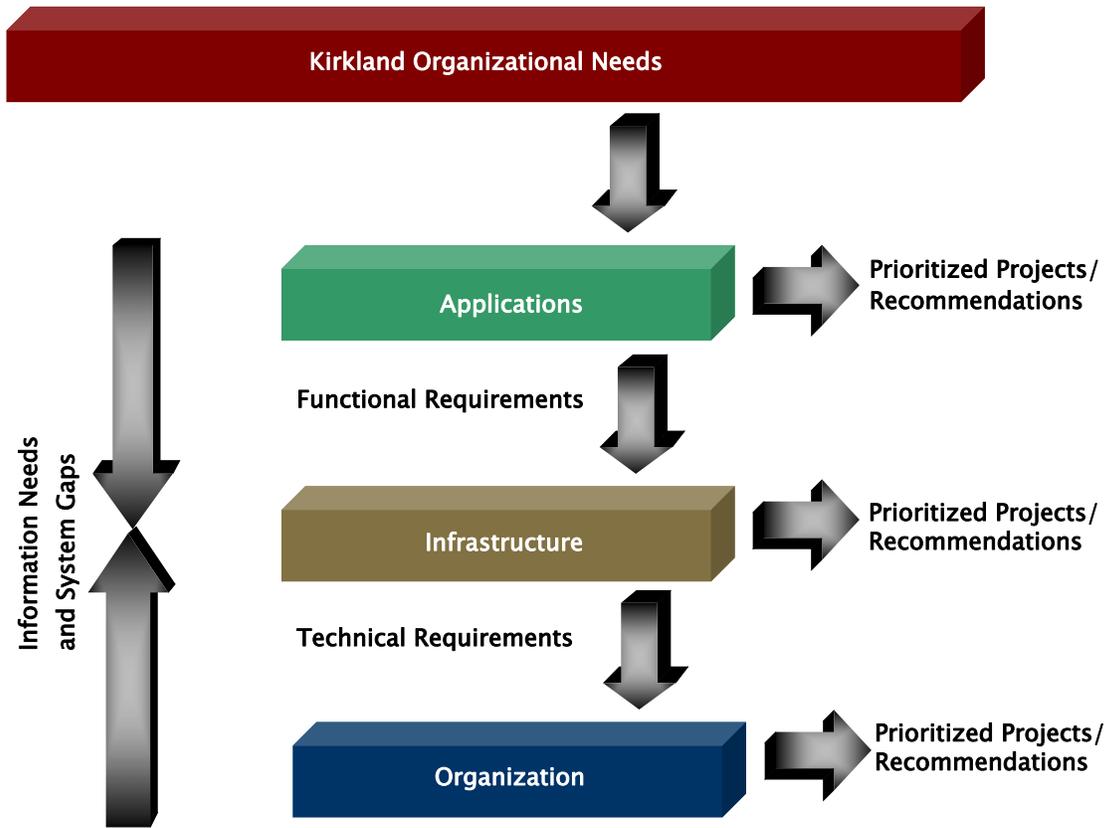
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3. Improve the effectiveness of communications with citizens
4. Implement systems as driven by state requirements or standardization between cities

The framework is one of a number of methods we used to prioritize opportunities. We consider it a tool to create a common understanding and consensus among the team on the prioritization criteria and establish a process for objectively ranking the opportunities. Other factors affected how we put together the implementation plan, including existing plans and schedules, logistics and expectations within City of Kirkland, and potential dependencies between opportunities that could affect the timing for initiation.

The process of identifying candidate projects and recommendations took both a top-down view to ensure that City priorities are reflected in the recommendations, and a bottom-up view to ensure that all technical gaps and opportunities were identified (see Exhibit 4).

The resulting recommendations (see Exhibit 5 for a selected summary) are categorized by whether the primary focus relates to organization (including staffing, policy and governance), applications (including database and regional efforts), or infrastructure (network and server resources).

EXHIBIT 4. RECOMMENDATIONS AREAS



The following table (Exhibit 5) lists recommendations that are provided to illustrate highlights of those contained in the Strategic Plan. The final project list has been filtered down from a list of well over 100 candidate projects. The final project list is comprised of 64 projects that have been prioritized and programmed for implementation within the next 5 years; a few have been placed on hold indefinitely. All of the projects represent significant efforts that have either a department or enterprise impact.

EXHIBIT 5. RECOMMENDATIONS SUMMARY

APPLICATIONS	
Implement an Electronic Document Management System (EDMS)	<i>Continue the procurement process and prepare for implementation. Execute a Discovery/Planning project to review and document key use cases associated with that function across the enterprise. Encourage a review of existing processes, and potential re-engineering based on the outcome. Deliver prioritized list of use cases for implementation - the document management roadmap - with target implementation dates.</i>
Develop a Virtual Kirkland GeoSpatial Model	<i>Create a virtual model of the city, or parts of the city, using digital terrain models, building footprints, tree inventory, building textures, window treatments, sidewalks, and other layers to demonstrate how a development (e.g., a new commercial or office building) or policy (e.g., Zoning Code, Comprehensive Plan, etc.) will visually impact the city. This may also incorporate the ability to show changes over time.</i>
Analyze recruitment process and implement an online application solution	<i>Improve and automate the process for attracting and hiring quality staff, including leveraging our regional relationships to provide a regional applicant portal. This project will be pursued jointly with regional partners and executed in two phases. Phase I will analyze areas for improvement and how technology can assist with process automation. Phase II will implement an Application Online solution based on the results of Phase I.</i>
Streamline permit process workflow	<i>Perform detailed review of all permitting processes, workflow, and roles and responsibilities. This work will prepare the City to scale its permitting function to accommodate new demand post-annexation. In addition, the permit process workflow will provide guidance to the EDMS project to ensure that the system is aligned to effectively support permitting.</i>
Receivables	<i>Document the Accounts Receivable process for each department that currently deals with receivables. Define requirements for an Accounts Receivable system. Implement a centralized AR system (potentially Springbrook) with refined AR processes. Provide automated posting to IFAS.</i>
e-Gov	<i>NWMaps is designed to be an online GIS mapping resource available to the public both for Kirkland-specific information and to provide regional GIS data from multiple entities into a seamless whole for specific data layers. NWProperty.net is a regional property locator services. The eCityGov Alliance Operations and Executive Boards manage the work plan for the system which facilitates decision-making for</i>

	<p><i>businesses looking to relocate to or within Kirkland and other eCityGov alliance members. .</i></p> <p><i>MyParksandRecreation.com is a single online source for regional information about parks and recreation opportunities. The website allows citizens to search and find availability of classes across the region, connect to City sites to register for recreation classes. Particular work this year is to integrate parks, facilities, and trails information for the region with search functionality and GIS component</i></p>
Mobilize Remote Workforce	<p><i>Develop a city-wide mobile strategy. For example, to what extent to we want to provide mobile systems, and how we will maintain connectivity? There are currently funded in-flight mobility projects to provide GIS connectivity in the field and for field inspectors in public works and building. The City already provides mobility solutions for Police and Fire (Fire's are managed by the City of Bellevue, who also dispatches Fire). This project is to define the strategy for current, funded, and unfunded wireless mobility needs. Unfunded mobility projects include providing photographic and complaints data to code enforcement officers via mobile technology, Mobile fire inspections, and field time entry for Public Works & Parks crews. The strategy should include functions to automate, tools for automation, wireless infrastructure, estimated costs for implementation and support, and ongoing governance strategies designed to encourage technical flexibility.</i></p>

INFRASTRUCTURE

Implement a storage area network	<p><i>Install a Storage Area Network (SAN) attached to key servers based on application storage requirements. The system will give the City a flexible central pool of data storage space that can be allocated to applications as needed.</i></p>
Perform server virtualization	<p><i>Perform server virtualization to reduce the physical footprint of the servers in use (reducing electricity and cooling load), and allow the City to maintain a comprehensive testing environment, potentially reducing the number of outages due to change issues.</i></p>
Improve network redundancy	<p><i>Consider entering into an agreement with the City of Bellevue to use the fiber connection between the two cities and share connections to King County as a back-up link in the event of an outage. The City of Kirkland recently established multiple pairs of fiber cable between Kirkland City Hall and the City of Bellevue's new data center. The city should also evaluate the redundancy of its phone system.</i></p>

Implement automated system monitoring	<i>Select and implement automated system monitoring tools on critical City systems. There are a number of commercially available tools that can be easily implemented, would significantly reduce the time required to perform the daily checklist, and provide a real time view into the health of the infrastructure. The City IT department's current process uses a lengthy daily checklist to verify that infrastructure services are working correctly and to identify potential issues. It is a time consuming process and can benefit from automation.</i>
Address disaster recovery needs	<i>Implement back-up and recovery hardware infrastructure and redundancy of various City systems. Also utilize neighboring City of Bellevue data center to store backup systems and Bellevue's connection to other agency networks to ensure connectivity during emergencies.</i>

ORGANIZATION

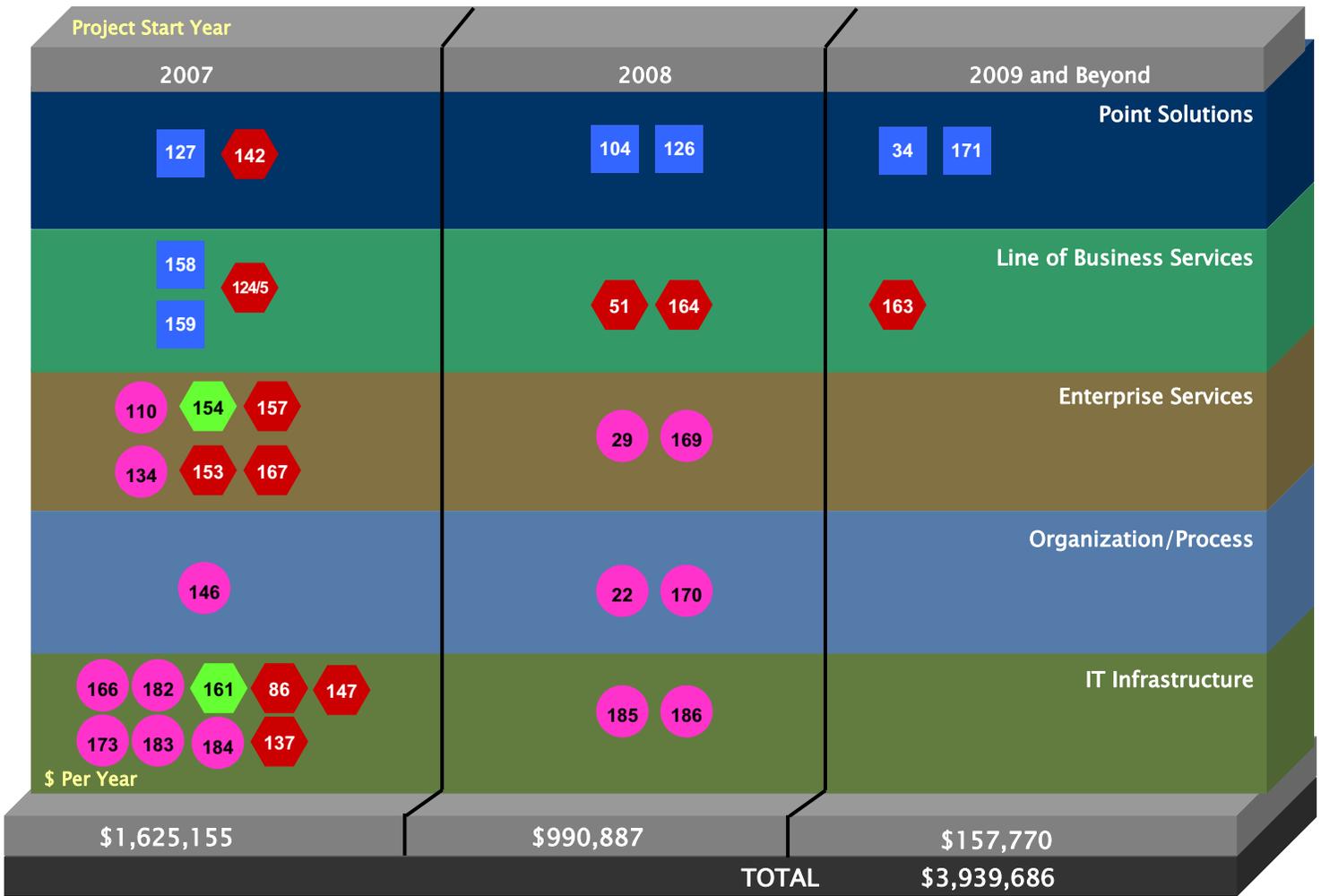
Continue approach to regionalization and establish a strategic, rational process for regional project planning and selection	<i>Work with regional partners to develop a set of criteria to select projects for consideration. Convene an annual coordination meeting between key regional representatives to share annual programs, priorities, and identify synergies. Regional decision-makers should involve appropriate representation in project selection discussions. These should be individuals that can speak to implementation challenges.</i>
Introduce the role of Public Information Officer (PIO)	<i>Add a PIO reporting to the City Manager's Office (CMO). Tools and technology to support the PIO should reside in IT. The PIO will be point for cross-departmental coordination on critical external communications, branding, media relationships, and emergency communications.</i>
Introduce the role of Application Team Manager	<i>Add a full-time application team manager with responsibilities and high demand for applications staff time for workload leveling, prioritization, issue escalation and project performance monitoring. The application team manager will be able to relieve the project management workload which will exceed existing staff capacity over the duration of the plan.</i>
Implement a project governance body or IT Project Management Organization (PMO)	<i>Implement a virtual project management organization to develop project management best practices and delivery standards. A virtual project management organization (PMO) is one where critical project delivery roles are primarily distributed amongst existing staff resources. The IT PMO will provide monitoring and review of projects for quality and also provide project portfolio management and prioritization. It is recommended that the</i>

	<p><i>proposed Application Team Manager position chair the PMO and develop an implementation plan. The implementation plan should take a phased approach that defines the PMO components (i.e. standards and best practices) and defines plans for training and resource assignment. It is further recommended that the PMO functions be piloted on major projects and focus on the most challenging aspects of project delivery as currently experienced by City of Kirkland IT, which are scheduling and resource leveling.</i></p>
<p>Continue to add staff as appropriate and as resources allow</p>	<p><i>Identify and address other staffing gaps such as those currently filled by one-time funded staff and those posed by future growth plans. The City should request ongoing City funding for its four one-time funded staff who are not currently built into the City's base budget and whose workloads are not anticipated to diminish. Other current staffing needs have been identified as a GIS specialist (see GIS Strategic Plan), network specialist, and an intern. As the City grows – in physical size through annexation and in associated staffing and infrastructure – the IT department should continue to assess its customers' growing needs and add staff as appropriate to help support the City's ability to run efficiently.</i></p>

1.4 Impacts and Plan Forward

The IT department is currently resource constrained in its capacity to lead projects. All of the systems analysts are committed to significant maintenance activities and daily support for current systems. Availability of key staff for projects currently ranges from 25 percent to 50 percent, with many already committed to long-term projects. Adding an applications manager will take responsibility for a portion of the project management workload and help ensure that all projects are delivered efficiently. The following plan (see Exhibit 6) illustrates the initial implementation plan for the strategic plan project portfolio. The horizontal layers on the graphic depict the scope and focus of the project. Infrastructure projects represent improvements to the technical architecture (hardware and networking) that supports applications for the enterprise. Organization/process projects are improvements to staffing and business practices that improve IT service delivery or ready the organization for new applications. Enterprise Services, Line of Business Services and Point Solutions are new applications or enhancements to existing applications that have increasingly focused scope and benefit (e.g. point solutions address a specific need within a department). This plan will be adjusted as necessary over the next 5 years as priorities change, available resources fluctuate, and new needs emerge.

EXHIBIT 6. PLAN SCHEDULE AND COST SUMMARY BY YEAR AND PROJECT TYPE



PROJECT KEY FOR EXHIBIT 5

- | | |
|---|--|
| <ul style="list-style-type: none"> ■ 34 Position Management ■ 104 Refine Parks Work Order Process ■ 127 Pawns Downloads ■ 158 Fire Inspection implementation ■ 159 In-Car Mapping ■ 171 Online court payments ● 22 Permit Process Mapping ● 29 Receivable Integration ● 110 Virtual Kirkland Geospatial Model ● 134 Staff Scheduling ● 146 Employee Status Change Process Analysis & Automation ● 166 NWMaps.net ● 169 Electronic archival system for all email ● 170 Standard Reporting Tool ● 173 Disaster Recovery Planning | <ul style="list-style-type: none"> ● 154 IFAS 7i: HR/Finance System Web-based Client ● 161 Mobile Remote Access for Field Operations ● 51 Probation Management System ● 86 Software License Tracking ● 124/5 Electronic Ticketing & Accidents ● 137 Digital Voice Recording System ● 142 JBRS ● 147 MyParksandRecreation.com ● 153 MyBuildingPermit.com ● 157 Recruitment Process Analysis & Application Online Implementation ● 163 Hansen Upgrade ● 164 Permit System Replacement ● 167 NWPProperty.net |
|---|--|
-
- | | | | |
|------------------|------------------|-----------------|---------------|
| ■ 158 Department | ● 184 Enterprise | ● 161 In Flight | ● 137 Must Do |
|------------------|------------------|-----------------|---------------|

2. BACKGROUND

This document summarizes the analysis and recommendations for the City's Information Technology Strategic Plan (ITSP). This document is the result of many hours of discussion and work with and by City staff. CIO Brenda Cooper served as project sponsor. The IT Strategic Planning Group and primary contributors were Brenda Cooper, Karen Friesen, and Kassie Tadsen; the entire IT department provided significant input on this effort as well. The remainder of the City team was comprised of contributors from throughout the City.

The ITSP identifies opportunities for enhancing IT delivery through improvements to its organization, applications, and infrastructure. These improvements are expressed as strategic recommendations and projects that comprise an implementation plan. We divided these into a two-year view (short term) and a five-year view. For each opportunity we recommend for execution within the next two years, we present its strategic value, the scope of the recommended solution, resource requirements and proposed schedule, as well as any constraints and challenges that might affect its completion. A comprehensive list of all projects identified during this analysis, including five-year opportunities, is also provided without detailed estimates. An appendix of key information and analyses is included as supporting documentation.

2.1 Document Purpose

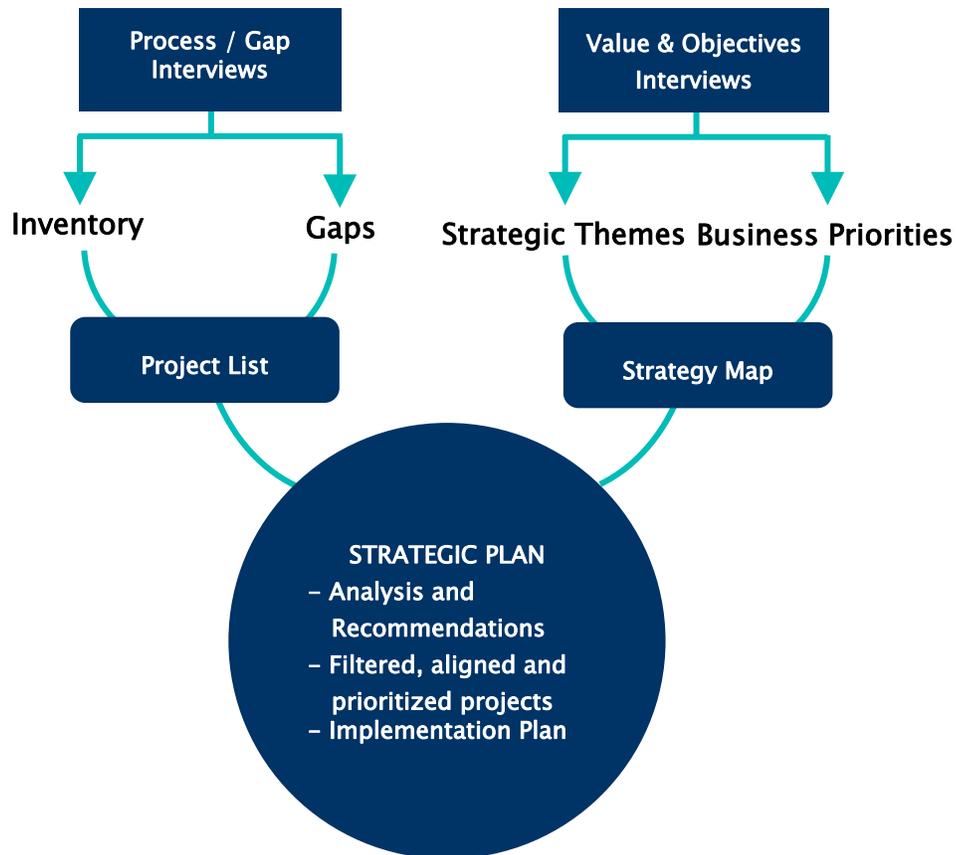
The ITSP charts the course for the current five-year planning horizon. The strategic recommendations are provided to support tactical and operational decision-making. The implementation plan summarizes projects which transform the plan into actions that result in the improvements needed to support the City's strategic outcomes. Components of this plan are intended to serve as tools by which to manage the plan's implementation and to record the changes to systems and conditions the City should affect according to the plan. Since the plan is not intended as a static "snapshot" in time or view ahead, the stewards of the plan should stay open to new opportunities, be aware of emerging drivers and their impact on priorities, and revisit the plan as resource levels change.

2.2 Approach and Methodology Overview

The approach was chosen to provide a business focused roadmap for IT investment over the next five years. Building consensus among the IT department's customers and stakeholders, including City departments, the City Manager, and City Council, was a special focus of the approach. Additional information about the approach and methodology are included in the Analysis, Findings and Recommendations that are included in Section 3.2. Major activities, which are illustrated in Exhibit 7, included the following:

- Documentation and cataloging of existing applications that are core to City business
- Identification of gaps and opportunities that represent needs and potential projects
- Identification of critical strategic themes that provide a project prioritization framework
- Development of a Strategic Plan that presents a synthesis of recommendations
- Assessment of the IT infrastructure and development of the Infrastructure Plan

EXHIBIT 7. DISCOVERY AND ANALYSIS PROCESS



The ITSP methodology took a comprehensive view of the City's business processes and infrastructure while focusing on current and future needs to form recommendations to guide the City's IT investments. In order to achieve this, the methodology had the following qualities:

- Engaged stakeholders to set a business direction, using a balanced scorecard approach.
- Talked to key business and technical resources.
- Formed the technical direction of the plan in alignment with results of the business analysis and balanced scorecard model.
- Developed recommendations which are technically and financially consistent with information gathered from the extended City team.

Our approach utilized decision models to align the IT department with the City's overall mission, goals and objectives. Through interviews with City executives and staff, we were able to identify changes and projects that would improve the Department's ability to support annexation activities, focus on primary IT activities in support of other departments, manage City resources effectively and

efficiently, and ultimately provide improved customer service. As part of this approach, some projects with merit, such as forms analysis, events permitting, and application integration, were placed in an on-hold category because they lack priority and/or funding in the five-year horizon covered by this plan.

This document, as the summation of these tasks, is intended to be a concise, clearly communicated plan that will prepare the City to continue to provide its citizens, staff, and customers with quality services befitting the community.

MISSION, CITY OF KIRKLAND IT DEPARTMENT

Proactively provide cost effective, reliable, standardized,
and current information technology tools, systems,
and services including customer focused support.

2.2.1 IT-focused Balanced Scorecard Model

WHAT IS BALANCED SCORECARD?

The balanced scorecard is a management system (not only a measurement system) that enables organizations to clarify their vision and strategy and translate them into action. It is a linkage between internal business processes and external outcomes in order to continuously improve strategic performance and results. When effectively deployed, the balanced scorecard transforms strategic planning from an academic exercise into the nerve center of an enterprise.

A primary objective of the IT Strategic Planning project was to ensure that the information technology project ranking and selection criteria considered Kirkland's unique organization and organizational objectives. In order to achieve this, CH2M HILL used an adaptation of the Balanced Scorecard (BSC) Approach to consider Triple Bottom Line (Economic, Social, and Environmental) conditions and benefits for the City. The general framework was provided in Exhibit 3 in the Executive Summary.

This approach formed the conceptual foundation for our evaluation. If City management determines to move forward and develop a scorecard, we have framed some initial ideas regarding performance measures that might be used. However, for the purposes of the ITSP project, the primary purpose of this model is for context.

Exhibit 3 illustrated the general flow of objectives involved in strategy execution per the Balanced Scorecard Approach. Objectives in each of the four BSC "perspective" areas are generally related through leading and lagging interaction. Thus, a strategy map is used to "decompose" a strategic theme (or set of strategic themes) into the workings of an organization. By incorporating the motivation, tools, and skills needed to improve the leading performance types into the day-to-day workings of the organization, we can accomplish the strategic results that we seek (lagging condition types).

For the purposes of the ITSP effort, the objective was to identify the top strategic themes for the City and to consider the technology tools (and the business processes that may require technology tools) that would drive achievement of those themes in the prioritization of potential IT projects.

2.2.2 Identification of Strategic Themes

While the City Council had recently attended a retreat and identified a list of Council priority areas (see list below), the items on the list are not considered to truly represent strategic themes, per se, nor do they provide enough guidance for strategy development or IT prioritization.



In order to extract strategic themes for Kirkland, the City Manager, Assistant City Manager, all Department Directors, and nearly all of the City Council members were interviewed. A surprisingly consistent set of themes and priorities emerged from these discussions. The identified themes are discussed in the following section. Examples of technology and process impacts are identified below primarily for illustrative purposes. While we see these as potentially important projects, the actual projects (and finalization of criteria) were selected in concert with City IT staff.

2.2.3 The Themes

Several themes emerged from the interviews. They are categorized below into: a short-term thematic goal, long-term externally-focused themes, and a long-term internally-focused theme.

Short-term Thematic Goal

Prepare for Annexation

Some themes represent an important but temporary objective – the single thing that the organization must do over the next 6 to 18 months to be successful. In Kirkland’s case, this critical goal is to prepare for annexation. There are a number of ways that this goal can impact the City’s technology needs and business processes. These include the following:

- The need to make business processes scalable (e.g., we might be able to do things the way we do now for the current population/workforce, but not for the expanded one).

- The need to provide systems and support to an increased City staff level.
- The need to provide systems and support to a more dispersed City staff (e.g., satellite offices).
- The need to provide services and systems to an increased City population.

Long-term Externally-focused Themes

These themes represent ongoing externally-focused City objectives that continue well into the future.

- Increase the density of the city (in compliance with State mandate) while preserving Kirkland's existing unique character and sense of place.
- Improve the effectiveness of communications efforts/interaction with ALL citizens.
- Continue to improve the walkability of the city.
- Maintain and enhance the unique connection to Lake Washington.
- Have Kirkland recognized as a technology leader in the region.

Increase Density, Maintain Sense of Place

The themes above are listed in decreasing order of importance to the City. This is, of course, based on our perception from the interviews. Clearly the most important and overarching theme (as well as perhaps the most challenging) is that of increasing the density of the city (in compliance with State mandate) while preserving Kirkland's existing unique character and sense of place. Other variations of this theme include maintain the "livability" of Kirkland, be the "un-Bellevue," maintain an "authentic main street" or a "real downtown," keep the "there...there."

Planning rules and processes and design guidelines are one important component of this theme. Particular focus areas for this theme are: the downtown area (Lake and Central, Lakeshore Plaza, Park Lane, downtown parking solution), the Juanita area, Totem Lake, and the 85th Street corridor. A particular challenge to this theme is the 'not in my backyard' (NIMBY) syndrome and the high level of resistance to change in Kirkland.

There are a number of ways that this theme can impact the City's technology needs and business processes. These include the following:

- This challenge creates the need to refine the planning/rulemaking/development business process area. These efforts, which would include evaluation of the entire business process related to development (planning, rulemaking, project approval, and citizen acceptance), would support scaling for annexation and possible better leverage economic development opportunities.
- An important IT related objective would be to improve the clarity and ease of Council decision-making and citizen understanding and acceptance of complex decisions (e.g., economic development projects) through the use of effective spatial visualization tools. In particular, this approach can provide citizens (and Council) with alternate views of the future to support decision-making, including the ability to determine whether current zoning rules

are consistent with desired economic development objectives. Another benefit of such a system would be the ability to rule out the as-is scenario, if it is not one of the options. Residents have a tendency to compare projects against the as-is even when that is not a viable option (e.g., the test cottage village project was compared in residents' minds versus the privately owned green space there prior – retaining that space as undeveloped was not a viable option).

Improve Communication with Citizens

Another relatively universal theme is the desire to improve the effectiveness of communications efforts and interactions with ALL citizens (“be both high tech AND high touch”). There are a number of ways that this theme can impact the city’s technology needs and business processes. These include the following possible opportunities/projects:

- Evaluate the current communication processes (what to communicate, to whom, how often, how to communicate, who decides?). Note that this is not primarily a technology issue.
- Increase citizen and staff web-based “self-service” opportunities (e.g., reservations through MyParksandRecreation.com).
- Use technology to enhance the quality and effectiveness of strategic community involvement and citizen interaction where possible (not just more communication).
- Develop an electronic means to provide access to public documents (e.g., through an electronic data management system [EDMS]).

Other External Themes

Other externally focused themes include: improving the walkability of the city (“FROM places TO places”), and maintaining and enhancing the unique connection to Lake Washington, and positioning Kirkland as a recognized technology leader in the region.

These themes potentially impact the City’s technology needs and business processes as follows:

- Desire for security cameras throughout City.
- Wireless in the parks.
- Wireless in the city (like Google/San Francisco deal).

Long-term internally-focused theme

One key internally-focused city theme was identified.

Do more with less.

There was broad consensus that the City operates in a very “lean” mode. This mode of operation is generally well-accepted by City department managers. However, there is also an interest in operating in the most efficient way possible to make the best possible use of those lean staffing levels. There are a number of ways that business process improvement and effective application of technology can support this desire. Examples of this include providing access to field workers to City systems (timekeeping, MMIS, etc.), and supporting the replacement of paper processes with electronic where possible. While the technology can support efficiencies, the addition of more tools to save staff time in one area correlates to the need for additional IT staffing to implement and maintain those systems.

2.2.3 Application to Prioritization

The Criteria for Prioritization

It is recommended that the most important themes above serve as the decision criteria for ranking the importance of IT projects based on “value.” The collective value rankings were matrixed by the collective score of a resources based set of criteria (e.g., cost, schedule, resources, and uncertainty). The value side of the matrix then was driven by how well a project serves to move the City toward achievement of its themes:

- 1. Increasing density while preserving Kirkland’s character and sense of place**
- 2. Doing more with less (efficiency and effectiveness)**
- 3. Improve the effectiveness of communications with citizens**

And, a final criterion is that, while not driven by a key strategic theme, provides for consideration of the many standard systems encouraged or mandated by the State and other authorities/standards-making organizations, as well as those projects that are valuable because the risk of not doing them is a critical driver.

- 4. Implement systems as driven by State requirements or standardization between cities, as well as those that are critical to the City’s operations, such as improving disaster planning.**

Exhibit 8 shows the value and complexity scoring system utilized.

EXHIBIT 8. VALUE SCORING SYSTEM

Item	Values	Points
Item 1	Increasing density while preserving Kirkland’s character and sense of place	4 points
Item 2	Doing more with less (efficiency and effectiveness)	3 points
Item 3	Improve the effectiveness of communications with citizens	2 points
Item 4	Implement systems as driven by State requirements or standardization between cities, as well as those that are critical to the City’s operations, such as improving disaster planning.	1 point

To provide a meaningful spread in scoring, each criterion was given a qualitative weight of high, medium, or low based on the degree to which the project supports the value and its respective strategic theme.

For example:

Project 157, Recruitment Process Analysis & Application Online Implementation, received one of the highest value scores with 28 points. The 28 points were derived from the project’s scoring against the criteria in Exhibit 8.

Value Criterion	Degree to which project supports (High/Medium/Low)	Criterion Score
4 points	High (x3)	12
3 points	High (x3)	9
2 points	High (x3)	6
1 point	Low (x1)	1
Total		28

2.2.4 Gap Analysis, Business Needs and Priorities

Concurrent with the identification of themes, interviews with City of Kirkland departmental representatives identified gaps and verified the catalog of existing applications. Represented in the interviews were Police, Fire, Building, Public Works, Planning and Community Development, Parks, Courts, Finance and Administration, City Manager’s Office, Human Resources and Information

Technology. Additional interviews were held with each IT division. Each interview followed a guide in order to maximize consistency and completeness across all departments.

Information collected from the interviews describing existing applications was used to verify existing City of Kirkland applications (developed by the IT Applications group) and is summarized in the Applications Portfolio (Appendix B).

An additional goal of the interviews was to provide a bottom up view for comparison and contrast with the top down work performed at the executive level during the BSC analysis. The goals of this process were to:

- Develop an inventory of processes and functions supported by the business
- Determine the level of automation of those processes
- Document gaps in process automation and areas of improvement through process re-engineering
- Obtain guidance and insight on potential solutions
- Review business priorities at the line manager level

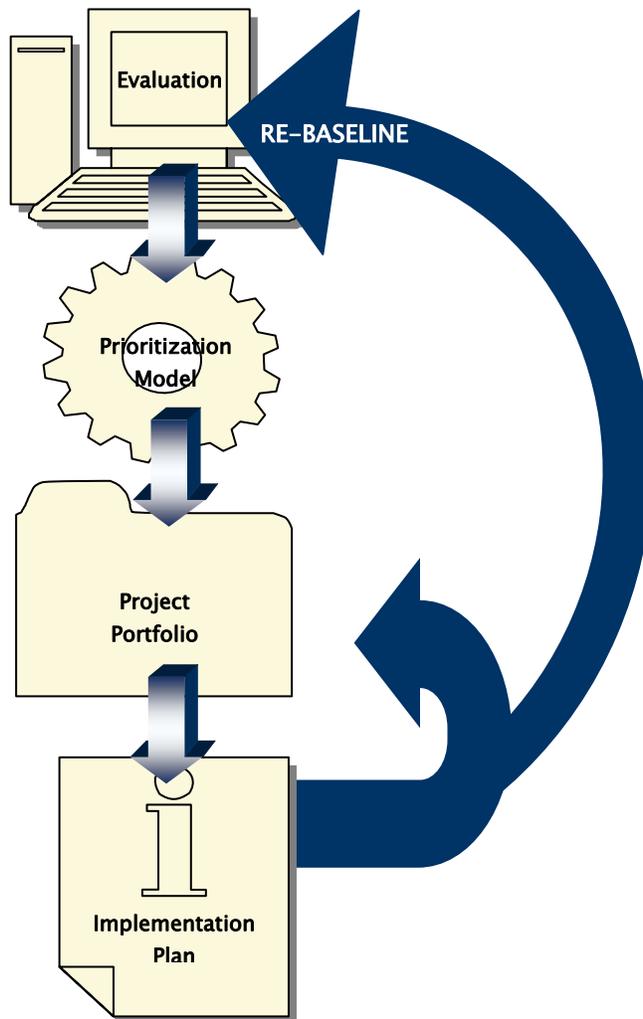
The workshops resulted in the collection of 178 gaps in service, business process, or infrastructure, which became the basis of determining the initial project list. Gaps identified during the interviews are captured in a consolidated gap analysis (Appendix C). These gaps were reviewed by the Applications Team and further refined to obtain common themes across the departments, as well as to determine potential remedies.

The gaps identified were used to develop candidate projects. This effort resulted in a little over 80 projects, which were then categorized by urgency: Just Do It, Must Do It, and the Project Portfolio. Each project was rated for its relative value using the 4 major themes (described above) identified during the BSC analysis – Conformance, Sense of Place, More with Less, and Communications. In addition, each project's impact on annexation and as a regional candidate was also noted for prioritization purposes.

3. STRATEGIC PLAN

The previous section explored the context in which IT strategic planning was undertaken, including overarching goals and their technological implications for the City’s future. In this section, we focus on the City’s IT Department: where it is today as an organization and recommendations for the future. The recommendations are based on the findings from the interviews discussed in the previous section, and reflect and balance the views of elected leadership, City department heads, managers, IT customers, and IT staff. Exhibit 9 illustrates the Strategic Plan lifecycle.

EXHIBIT 9. STRATEGIC PLAN LIFECYCLE

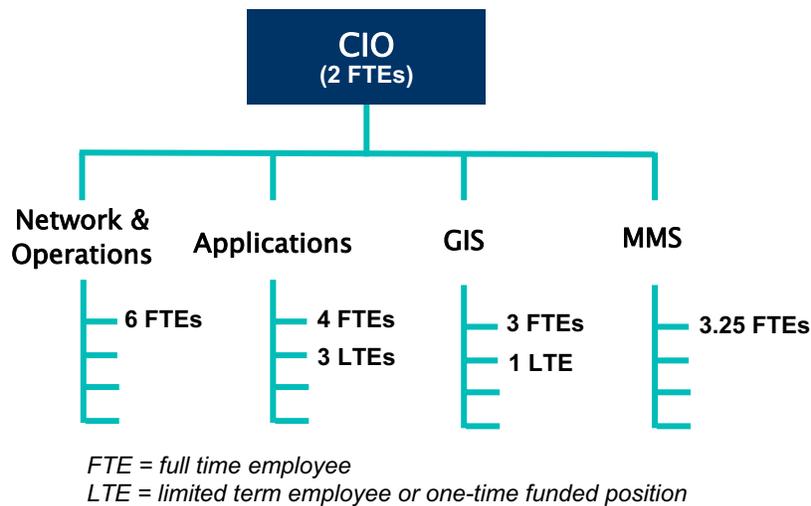


3.1 Current State of IT Department

By many standards, the City of Kirkland IT Department is exemplar of quality, innovation and efficiency. Customer surveys consistently provide high marks for service. The City’s collaboration with regional partners to deliver innovative public service applications is award-winning and is the leading national model for regionalization in delivery of IT solutions. Successful strategies such as this as well as prudent management have enabled the City to enjoy high levels of IT service with a minimum level of staff.

The City of Kirkland IT Department is comprised of 22 staff who provide centralized support for about 500 customers (see Exhibit 10), including the following:

EXHIBIT 10. CURRENT ORGANIZATION



- All major applications such as finance, HR, police CAD, RMS, and mobile applications, utility infrastructure inventory and work orders, permitting, an internet and intranet site, parks and recreation, etc. Includes support of database systems, project management and reporting.
- Support for desktop PCs and network print devices including an internal help desk
- All network and infrastructure support including internal wired and wireless networks, server infrastructure, IP telephony, and a portion of shared regional fiber networks
- A training program, primarily geared toward office applications
- A full enterprise GIS program

- Multimedia Services (MMS), including telecommunications franchising, most print and some electronic media, and all content and production management for two government television stations
- Regional applications, primarily in electronic government through eCityGov.net, which is an alliance of multiple local cities which co-own and manage eGov infrastructure
- Support to other cities, most notably Mercer Island and Medina, including police applications support (both cities are police dispatch customers)

3.1.1 Major Accomplishments Since 2001 Plan

The City's IT capability has increased significantly over the past several years. It remains a recognized leader at the forefront of government agencies. Some recent accomplishments include:

- Implemented the Hansen Maintenance Management System.
- Provided the technical support necessary to host the City of Mercer Island as a Dispatch client.
- Implemented the King County sponsored RAIN network to help officers share data amongst and between jurisdictions.
- Completed a re-design of the City of Kirkland website to make information more accessible.
- Implemented a pilot program for city-provided wireless access in parks and, possibly, in business districts.
- Implemented a content management system for streaming video over the internet.
- Selected a vendor to assist us in implementing a document/records management system, including workflow management, to ensure we are handling documents in the most efficient manner possible, reduce offsite storage and retrieval, and gain process efficiencies.
- Launched an online Intranet-based portal to give city staff access to HR functions from their desktops.
- Allowed citizens to pay for utility bills online.
- Replaced the city's automated time entry program with a new one, and made it available to all departments.
- Integrated responsibility for cable and telecommunications franchising, graphic arts, and the city's television stations into the department.
- Completed and distributed a Service level Agreement for the Multimedia Services Division.
- Implemented and supported a program of opt-in mail lists as a new way to keep the community informed about topics and events.
- Continued work with Lake Washington School District, the University of Washington, and the City of Bellevue to lay fiber-optic cables in key locations throughout Kirkland.

- Completed mapping of major utility layers so that water, wastewater, storm, and sewer are now all mapped.
- Joined the eCityGov Alliance in joint rollout of several web-based tools that assist businesses and citizens

3.1.2 Department Finances

The IT department is an internal service fund, and departments are billed for IT as a line item in their budgets. Large software purchases, server replacements, and most support for GIS projects are funded through the Capital Improvement Plan (CIP).

The combined capital and operating budget for the years 2007 through 2011 is expected to be about \$24 million or somewhat less than \$5 million per year on average. The capital budget includes costs associated with infrastructure and systems improvements, including the outside services required to implement them. The operating budget covers staff costs, maintenance and repair costs, consumables, and other various costs required to support provisioning of IT services to the City of Kirkland.

For 2006, the operating budget is approximately \$ 2.8 million and the total CIP project requests were just over \$1.2 million dollars. This equates to 30 percent of IT expenditures going towards new capital assets and facilities. While this ratio is quite high from a general government perspective, it is primarily indicative of two things: 1. the current systems are maintained and operated efficiently; 2. significant latent demand for IT/automation exists throughout the City. This level of capital expenditure relative to operating budget is appropriate for the City of Kirkland, considering the major enterprise investments in process or in plan. This ratio will likely trend downward depending on the timing of additional major system replacements over the next 10 years.

3.1.3 Challenges and Constraints

A primary challenge of the IT department is maintaining high operational levels of service while efficiently delivering new improvements to infrastructure, process and systems. Other challenges arise from the nature of the business IT supports. Some of these include:

- Consumption of IT resources by supported departments varies based on their ability and by the level of complexity of their systems and applications.
- Capacity constraints (primarily related to IT and non-IT staff resource availability) affect the ability to deliver projects within initial schedule time spans.
- IT staff are stretched between the time and technical challenges of new system implementation and those of day to day departmental support requirements.

3.1.4 Opportunities

The City of Kirkland has a comprehensive applications portfolio that provides services to individual departments and to the enterprise. For many of these systems, the City owns functions and features that have not been implemented. City IT staff are talented and resourceful and despite significant

daily responsibilities for desktop, applications and network support, manage to lead one or more projects to implementation. Additional project delivery resources, such as standard requirements and scheduling methods, could provide additional support to these efforts, improve schedule compliance, and further leverage City Staff. The City’s use of regional collaboration to provide IT and other services is a model that can be expanded upon.

3.1.5 Summary of Current IT Situation

EXHIBIT 11. IT DEPARTMENT ANALYSIS

<p>What IT does well</p> <ul style="list-style-type: none"> High quality service Recognized for regionalization efforts Stable organization with little turnover GIS 	<p>What IT can improve</p> <ul style="list-style-type: none"> Project management, resource scheduling Applications Manager position
<p>How IT can provide added value</p> <ul style="list-style-type: none"> Fully implement existing applications Add an IT PMO to coordinate project process documentation and requirements 	<p>What could harm the organization</p> <ul style="list-style-type: none"> Lack of disaster preparedness Lack of network redundancy One-time funding of staff not transitioned to FTEs as need for more support is demonstrated Preventative maintenance and routine testing are not accomplished due to over-worked staff

3.2 Analysis, Findings, Recommendations

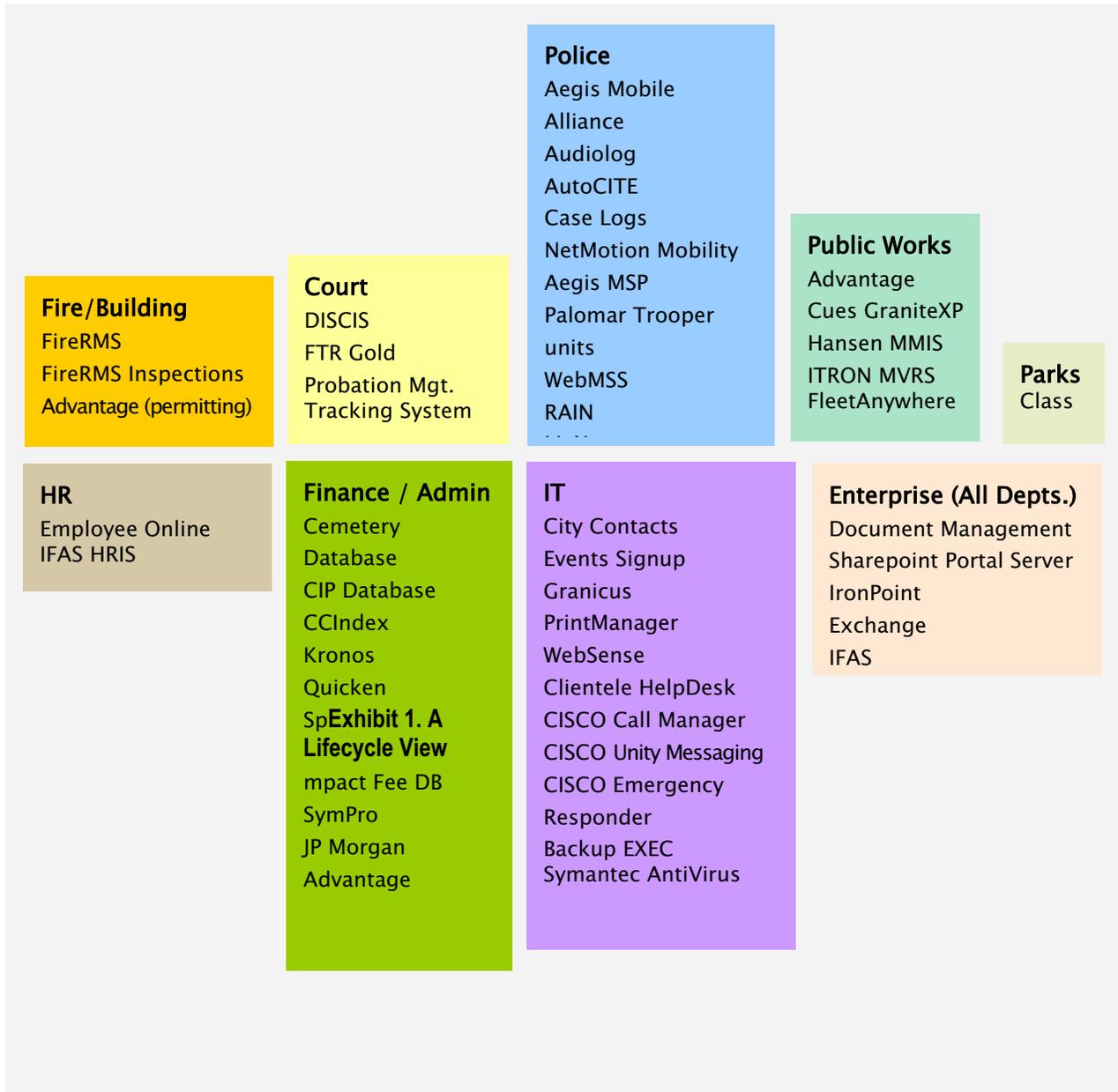
The City of Kirkland’s IT Department is well positioned to continue to serve the vital role information technology plays in fulfilling its mission and goals. There are several things the department can do to enable staff to meet ever-changing demands for service and over time can enhance the capacity of the organization. This section is organized along the areas that were identified in the City’s request for proposal. For each area, an analysis of the existing condition is provided followed by a recommendation of actions to be considered for improving upon the current situation.

3.2.1 Portfolio Management

The ITSP resulted in a technology portfolio that includes a server and network infrastructure portfolio, application portfolio, project portfolio, and skills portfolio. These set a baseline from which several

paths forward can be traced. Efficient IT management requires effective change management. Past investment decisions have resulted in a relatively diverse technology environment (i.e. several database platforms, operating systems). Some of these decisions have been correctly driven by requirements, others have resulted from the lack of a systematic approach to managing the IT portfolio. The current state of the applications portfolio for instance (Exhibit 12) presents a relatively high number of individual applications relative to the size, uniqueness, or complexity of the City's operations.

EXHIBIT 12. APPLICATIONS PORTFOLIO



KEY FOR EXHIBIT 12: APPLICATIONS PORTFOLIO

Application Name	Application Description
Sharepoint Portal Server	Intranet Software
SQL Server 2000 / Informix	Various Application Databases
Ironpoint	Internet CMS Software
DISCIS	State system for managing municipal court activity
FTR Gold	Court proceedings recording system
Probation Management Tracking System	Probation Management Tracking
Cemetery Database	Cemetery Plot Tracking
CIP Database	Capital Improvement Project Budgeting
CCIndex	Document Management
IFAS	Financial & Human Resource System
Kronos	Timekeeping (being replaced by Tenrox)
Quicken	Cash Management
Reflections X	Terminal Emulation and FTP
Springbrook	Utility Billing/Cash Receipts
Tax Tools	Sales Tax Analysis
Tenrox	Timekeeping
SymPro	Investment Management
JP Morgan	Procurement card transaction reporting
FireRMS	Fire Records
FireRMS Inspections	Fire Inspections
Employee Online	Employee HR/Payroll Info (internal)
City Contacts	City Phone Directory
Events Signup	Class and Event Signup
Exchange	eMail Server
Granicus	Streaming Video & Training
PrintManager	Department Print/Copy Tracking
WebSense	URL Filtering and Monitoring
Clientele HelpDesk	Help Desk Ticketing System
CISCO Call Manager	IP Telephony System
CISCO Unity Messaging	IP Telephony System
CISCO Emergency Responder	IP Telephony System
Backup EXEC	Network Backup System
Symantec AntiVirus	Virus protection and detection
Advantage	Permits, Business Licenses
Class	Parks Registration
Aegis Mobile	Police Mobile and Field Reporting
Audiolog	Dispatch and On Demand Call Recorder
AutoCITE (parking tickets)	Parking Ticket Data
Aegis MSP	Police CAD/Records/Corrections
WebMSS	Police NCIC/WACIC
RAIN	Regional Police Datasharing
LInX	Regional Police Datasharing
Hansen MMIS (Enterprise Solution)	Assets/Work Orders/Facilities/Service Requests
ITRON MVRS	Water Meter Reading
FleetAnywhere	Fleet Management

Application Name	Application Description
Case Logs	Detective case tracking
Rangemaster Pro	Police Range scores
Alliance	Police System (being replaced by Aegis Mobile & MSP)
Impact Fee database	Tracking of impact fees collected for construction
Palomar Trooper units	Police mobile computers

Findings and Recommendations

Validate and adopt the ITSP technology portfolio as a baseline and maintain it to reflect change. This information can be managed and updated in its current form (Excel workbooks) or can be used to populate a portfolio management tool.

Review and catalog the capabilities (functions and features) of existing systems (including those that are not currently implemented). Review requirements against this catalog prior to making new investment decisions.

3.2.2 Applications Portfolio

An inventory of all products currently supported by IT was completed and was later enlarged to include all modules of those applications. In addition, it was noted whether modules had been implemented, or were owned and not implemented. Information describing existing applications was captured in the Applications Portfolio (Appendix B). Exhibit 12, below, illustrates the current application portfolio (without module detail). Key information obtained for each application included:

- Application name and functional focus
- Number of users and business ownership (department or enterprise)
- Criticality and level of acceptance
- Vendor relationship (positive, negative, or average)
- Technology stack
- Assessment of annexation impact

Findings and Recommendations

Analysis of this data showed that the City already owns a number of modular functions that could positively impact service if implemented. The City also has a number of opportunities for consolidation – in effect standardizing on a particular vendor in order to reduce the number of products supported. Finally, Kirkland may want to investigate negotiating maintenance payment reductions based upon product use, given the number of modules that are not expected to be implemented.

Continue to document a preferred framework for commercial off-the-shelf (COTS) applications (IT Standards): *Kirkland IT should continue to evaluate new off-the-shelf, non-customized products, upgrades, and replacements for movement towards a desired technical framework that provides*

value and flexibility in delivery of City services. Currently, the most appropriate technical framework would center on the Microsoft Windows and SQLServer. Preferred COTS applications would be natively compatible with the Microsoft Windows family of operating systems and utilize the SQLServer database through an open architecture.

Services Oriented Architecture should not be a focus: While implementation of a SOA is desirable for a number of reasons, it is far less important in an organization that does not focus on custom development. Applications that provide re-usable components that can be leveraged using the Sharepoint framework are desirable, but the SOA architecture should not be the focus of product evaluation at this time.

Evaluate and prioritize opportunities for better application integration: The City would benefit from a standard approach to system integration. The original discussion around this recommendation was focused on use of a third party tool, but this was rejected due to the cost of products and implementation. Other ad hoc approaches could be used to provide a solution for major pain points, such as Advantage & Hansen, Hansen & Tenrox, FireRMS & Tenrox, CLASS & IFAS. The key here is to estimate the cost of not integrating these in terms of time spent in redundant entry and error correction.

Review existing applications for potential consolidation: It may be that business or technical requirements that drove decisions to purchase products with overlapping functionality have changed. Opportunities for consolidation may exist to reduce the amount of functional overlap.

The City of Kirkland has acquired and implemented a large number of applications in the last several years, in some cases purchasing a larger product in order to fulfill a niche solution. The stated goal has been to provide mid-tier functionality, which generally translates to reduced expenditure for solutions. IT management is aware of the inefficiencies that have occurred due to this approach and the challenges that they present, including:

- Disparate look and feel across applications, requiring additional training and support
- Data are in product-related stores, rather than process-related stores, each with its own data model
- Workflow is challenging as processes cross multiple applications
- Reporting from these disparate data stores is challenging due to the multiple data models and inherent differences of data definition and different reporting tools integrated with each application

We recommend a fresh review of the applications identified in the technical data collection deliverable for potential consolidation.

3.2.3 Infrastructure

CH2M HILL reviewed the City's current IT infrastructure – including local and wide area networks, wireless infrastructure, security and server infrastructure – with the goal of prioritizing improvement projects required to support the strategic plan. One of the biggest challenges uncovered during stakeholder interviews was the growing storage requirements of applications. Part of the reason for

this is Kirkland's progressive use of technology, which requires the storage of geospatial data and large video files, for example. Another reason is the number of underutilized servers and hardware resources, which are often required by vendors in the implementation of new applications. These resources occupy precious data center space and cooling and power requirements. The infrastructure planning process took into account new demands generated by recommendations and projects that may impact infrastructure requirements. In addition, a gap analysis was conducted to identify existing resource constraints (unmet needs in either staff or equipment) that the Infrastructure Plan should address.

Findings and Recommendations

Implement a storage area network (SAN): *Projected storage requirements over the next two years will grow beyond the ability to effectively manage using traditional direct-attached storage technology. Driving storage requirements are annexation activities, significant expansion of existing multimedia services, files, expanded GIS usage, and a document management system. CH2M HILL is recommending the City install a SAN attached to key servers based on application storage requirements. This system will give the City a flexible central pool of storage space that can be dynamically allocated to applications as needed.*

Server consolidation/virtualization: *The wide range of applications used by the City has led to a significant number of servers that are allocated to a specific function. These systems are typically only lightly used resource wise and take up a large amount of rack space in the existing datacenter. During the course of the assessment CH2M HILL identified a number of systems that are good candidates for virtualization via technology such as VMWare. In addition to reducing the physical footprint of the servers in use, virtualization technology would also allow the City to maintain a comprehensive testing environment, potentially reducing the number of outages due to change issues. It would also reduce the amount of IT hours spent monitoring and maintaining servers.*

Implement better redundancy for network, but hold off on larger investment until annexation impact can be quantified: *During the course of the assessment, it was noted that the Cisco 6513 core switch that provides network services to the users located at City Hall and links the remote site together is a single point of failure. Given the cost of the Cisco 6513 chassis, space constraints in the existing datacenter, and the uncertainty of the effect annexation will have on employee distribution in the City, we recommend that the City invest in making the existing Cisco 6513 as redundant as possible and hold off purchasing additional switch hardware until the infrastructure requirements for annexation are better defined.*

Evaluate importance of call manager surveys and investigate implementation of redundancies: *The current Cisco Call Manager system is well designed and implemented with the exception that it lacks redundancy within current key components. If one of the Call Manager servers were to fail, certain services such as voicemail, call routing and queuing, and automated greetings could become unavailable for the duration of the outage. The City should evaluate the how crucial these services are to its day- to-day operations and determine if redundant systems are justified.*

Implement automated system monitoring: *The IT department currently uses a lengthy daily checklist to verify that infrastructure services are working correctly and to identify potential issues. While this checklist appears to catch early indicators of issues, it is a time-consuming process and only provides the organization a once a day look into the state of the environment. CH2M HILL has*

identified a number of low cost tools that can be easily implemented, would significantly reduce the time required to perform the daily checklist, and provide a real time view into the health of the infrastructure. These are detailed in the Infrastructure Plan.

3.2.4 Disaster Recovery

There is not a sufficient amount of dedicated funding to maintain a robust ability to recover Kirkland data in a severe regional disaster. Most of the City's data systems run on standard platforms using vendor-provided software. While this increases the City's resiliency in the case of a disaster, and makes it more likely that it could, in fact, recover from medium-scale disaster, the City could not currently recover some critical systems in a reasonable time frame. In other words, the City's ability to operate smoothly in a serious disaster is not adequate. CH2M HILL identified several infrastructure improvement projects that the City of Kirkland should complete to significantly improve the resiliency of the City network in the event of a failure. These are detailed in the accompanying Infrastructure Plan.

Findings and Recommendations

Implement changes to backup and recovery: Significant new storage requirements call for additional backup capacity and new backup systems. CH2M HILL is recommending the City expand the existing backup system to accommodate the increased demands.

Utilize Bellevue datacenter for disaster recovery (Site specific): The City recently established multiple pairs of fiber cable between Kirkland City Hall and City of Bellevue's new datacenter. The City should work with Bellevue to establish space in this facility for disaster recovery servers.

Proactively fund disaster recovery. To ensure disaster recovery funding is an ongoing priority, the City should build these costs into future acquisitions. This has not been considered in the past.

Undergo disaster recovery planning. There is a need for documentation and complete business continuity planning.

3.2.5 Financial Models and Major Systems Replacement

The City of Kirkland follows fundamentally sound approaches to financing its IT services and capital investments. There are a number of changes that could be made to simplify its financial models and better position it for large system replacements whether they are scheduled or emerging. Recent major system replacement cost analysis performed by the City of Kirkland IT Department indicates that an estimate \$840,000 of additional revenue needs to be identified to support current replacement assumptions and maintain a strategic reserve fund going forward. Currently, funds are set aside for major systems replacement in an ad hoc manner by transferring savings that are realized relative to planned expenditures.

Findings and Recommendations

Implement a simplified financial model based on FTEs rather than network logins: This provides a more stable and available data source for the basis of cost allocation. While some

departments will experience an increase in cost allocation, under the new model, it provides a better relationship for distributing the benefit of enterprise and core IT functions.

Select and Implement a replacement model for core systems: In addition to defined end of life plans for major systems, several scenarios could justify early system replacement. Key changes to the legal requirements for program administration may render existing systems incompatible. Vendor business problems such as bankruptcy or cessation of business activities may render the system unworkable (in real or in dollar terms). High degrees of customization may cause the application of vendor upgrades impractical. External factors such as population growth may overtax existing systems and require more scalable systems. Shifts in technology such as the introduction of Web self-service may provide sufficient additional benefit to justify early retirement of an existing application.

The standard replacement policy should take into account the system's customer satisfaction ratings, its conformity to a target architecture, the cost of replacement, the comparative cost of maintaining the existing and replacement systems and the potential benefits to be realized by replacing the system. Benefits of replacing a system may include efficiencies to be gained by streamlining business processes, allowing better integration of applications and data, or improve the service provided by the agency employing the software. Target architecture is an important consideration as it will have longer-term effects on maintenance costs by reducing the complexity of the overall infrastructure. Generally, cost analysis should be performed to provide a realistic understanding of the short and long-term costs and benefits of the project and ensure that the reasons driving the replacement are well-grounded.

Several options exist for funding major systems replacements. The most traditional option is to make use of the existing revenue sources and carve out a portion of those funds to go into a systems replacement fund. Another option is to issue special purpose IT improvement bonds, such as those pioneered by the Commonwealth of Massachusetts. Bonds may be approved for specific projects or a portfolio of projects and could be particularly effective for more urgent replacements. Each of these options have advantages and disadvantages with respect to the City's appetite for long-term debt and the challenges of scaling IT delivery, among others.

- **Increase CIP Allocation to IT** – Increase the volume of annual capital dollars available for IT projects.
- **Institute a Major System Replacement charge** – This would supplement the existing maintenance and operating charges and PC replacement charges. Charges should match to the scope of the system (e.g. line of business systems vs. enterprise systems).
- **Issue long term debt through councilmanic bonds** – Appropriate only for major enterprise systems replacement (i.e. Finance and Accounting systems).
- **Seek voter approval for special purpose bonds** – This would require careful consideration and a public campaign to educate voters on the City of Kirkland's record of fiscal responsibility and provide tangible benefit information to set appropriate expectations.
- **Tie system replacement for Line of Business Services to appropriate Special Revenue funds** – This option would cover only a portion of the long-term replacement needs and address only those departments with access to Special Revenue funds.

The City should consider one or more of the following major system replacement funding options or identify others that would be adequate to fill the anticipated gap in systems replacement funding.

3.2.6 Regionalization

The Eastside has a culture of regionalization, and IT is at the core of many of these cross jurisdictional efforts, which drive a significant portion of the IT department’s work. Some of these efforts have included the fiber consortium, police, parks and planning. The City of Kirkland has enjoyed benefits from its regionalization efforts. While many benefits to the public have been realized (e.g. consistent user experience, “one stop” point of service), other benefits with respect to IT finance and operational metrics have been harder to realize (e.g. economics of scale, speed of implementation). In addition, the process through which projects are identified, selected, and prioritized for regional implementation has at times lacked a rational decision framework and suffered from inadequate participation by those whom will be required to implement the projects.

One of the challenges of regionalization is the lack of control the City has over it. Regional efforts are more of a political process than an analytical one and require strategic involvement and sometimes compromise. The City’s current approach to regional project evaluation is to move forward with them if the initiative makes sense for its customers, not necessarily because it is cheaper, faster, better, or easier. At times, internal, non-strategic drivers force the need to complete regional initiatives.

Findings and Recommendations

Continue the current approach to regionalization: *The success of Kirkland’s regionalization strategy is evidenced by the award winning eGov Alliance. We recommend that the City continue this by evaluating each new candidate project with regionalization in mind. During the process of project identification and prioritization, the team identified projects (such as the online employment applications) that could be fulfilled more efficiently from a financial perspective by taking a regionalized approach, however, efficiencies must be balanced by “time to service” needs. Our team provided a criteria model for evaluation of candidates, recapped below in Exhibit 13. This model is an attempt to quantify the decision within the same overall dimensions as the prioritization model.*

EXHIBIT 13. PROJECT EVALUATION CRITERIA MODEL

Regionalization - Value			1-High	2-Medium	3-Low
Category	Rank	Points	3	2	1
Universal Need	1st	4	12	8	4
Economies of Scale	2nd	3	9	6	3
Network Effect	3rd	2	6	4	2
Cost Sharing/Mitigation	4th	1	3	2	1
Regionalization - Complexity			1-High	2-Medium	3-Low
Category	Rank	Points	3	2	1
Organizational Change	1st	4	12	8	4
Process Standardization	2nd	3	9	6	3
Varied Solutions in Existence	3rd	2	6	4	2
Lack of Public Consensus	4th	1	3	2	1

Establish a strategic, rational process for regional project planning and selection: *This will require development of a set of criteria that defines what types of projects are considered for regionalization. It will necessitate communication of projects that emerge outside of individual strategic planning cycles. At a minimum, an informal coordination meeting should occur between key regional representatives during the annual budget planning cycle (first quarter if amenable to all parties) to share their annual program, understand priorities, identify synergies and produce action plans for collaboration.*

Include appropriate representation in the project selection process: *Individuals who can speak to the implementation challenges of regional projects (such as complexity, risk and competition for staff resources) should be included in project selection discussions.*

3.2.7 Help Desk

The Help Desk is well established, and an application is in place (Clientele HelpDesk) that allows Help Desk staff to track issues and outages as they are reported. The application also allows Kirkland IT to track completion times. Help Desk staff noted some issues with regard to data quality.

In reviewing current practices, opportunities for implementing aspects of the Information Technology Information Library (ITIL) were considered. A key tenet of ITIL – providing a single point of contact for service – is already in place at Kirkland for Desktop Applications. Enterprise Applications – for example Police, Finance and HR systems – are typically serviced by the appropriate application administrator.

While it was agreed that there was room for improvement of tools and process, it was also clear the necessary requirements have been met to generate and report metrics against the published Service Level Agreement, at least for desktop applications and network issues.

In terms of Help Desk ratios, a survey performed by CH2M HILL with the assistance of the Municipal Research Service Center (MRSC) indicates that Help Desk to supported user ratios range from 1:125 to 1:150 in city governments. While it is difficult to compare directly between cities without completely understanding the scope of help desk responsibilities, at roughly 1:165, Kirkland is serving its customers efficiently relative to the identified benchmark.

Findings and Recommendations

Consider implementing components of ITIL over time: *ITIL is a set of best practices and tools that provides repeatable processes and a common language around IT services. Over time, the City should consider implementing relevant components of governance based on ITIL where they make sense for this size organization and where impact to speed of delivery is minimal. The Office of Government Commerce (OGC) recently published a guide for implementing ITIL in small IT units. ITIL Small Scale Implementation considers how the circumstances of delivering effective IT Service Management are affected by situations that typically occur within a small organization and how to get good results quickly by adapting the ITIL advice to circumstances. Based on CH2M HILL's observations of the existing support processes, it is recommended that the City of Kirkland IT Department consult the OGC Small Scale ITIL guide and consider efforts that drive consistency by which support is provided whether by Network/Operations or Applications Staff.*

3.2.8 GIS

Geographic Information System (GIS) implementation is a success story for the City of Kirkland. The City enjoys excellent GIS products and services as is evidenced by high quality maps, a number of GIS-enabled point solutions, and progress towards further integration of GIS with a number of business-line and enterprise applications. The GIS division completed a strategic plan in 2005 and is moving forward with recommendations from the plan.

Findings and Recommendations

Continue to implement the 2005 GIS Strategic Plan: *The 2005 GIS Strategic Plan articulates a rational strategy for the City to follow and is both consistent with and complementary to the IT Strategic Plan. It should be used in concert with this plan. The GIS Strategic Plan provides an in-depth, prioritized identification of staffing, service delivery, architecture, and infrastructure needs through the current IT planning horizon.*

Develop an integrated GIS/IT Strategic Plan: *Following implementation of the 2005 GIS Strategic Plan and the recommendations in this IT Strategic Plan, the City should develop an integrated document for the next planning horizon, beginning in 2010 or 2011. The integrated plan should include both the IT and GIS functions, as they are directly related in terms of resources, funding, organization, and customers.*

3.2.9 Staff Structure

The IT Department is divided into four divisions:

- The **Network and Operations Division** that designs, maintains and monitors the City's data and telephone networks. This includes security and Help Desk support.
- The **Applications Division** that procures, maintains, and supports primary computer applications and related database systems. This includes management of the Internet web site and the City's Intranet reporting.
- The **GIS Division** that designs, implements, manages, and maintains enterprise-wide mapping and spatial data analysis tools, mapping applications. The GIS Division also provides direct support to departments that do not have GIS professional staff.
- The **Multimedia Services (MMS) Division** that supports City staff with graphic design and production. The MMS Division also manages two television stations and creates special-purpose web design and development.

There are two primary gaps in the current IT organization: a central point for communications and a leader for the applications group. While integrating the MMS Division with IT has helped to coordinate City internal and external communications, there needs to be one person dedicated to directing, managing, and implementing a coordinated City communications strategy. The applications group leader is needed to offset the high number of direct reports to the CIO and provide workload leveling for the group. These recommendations are further described below.

Findings and Recommendations

Introduce the role of Public Information Officer: We recommend that Kirkland proceed with the desired addition of a Public Information Officer (PIO), reporting into the City Manager's Office (CMO). Tools and technology should still reside in IT, but priorities and process should be driven from the business.

A CMO-level reporting structure would also allow more effective cross departmental coordination, as well as better coordination in the event of an emergency. The PIO must be positioned at the right level in order to be truly effective.

PIO responsibilities should include items such as:

- **Branding** – Beyond color palette and logo, the PIO should be responsible for communicating the common themes that are important to Kirkland
- **Building media relationships** – This can take many forms, including providing content to media outlets in advance of major events
- **Providing communications liaison** – Providing coordinated responses for major news items or during emergencies, and acting as Kirkland's communications liaison to the regional emergency operations center
- **Interfacing with IT** – Coordination with IT on priorities and processes as chair of a Communications Steering Committee.

The role of the PIO is pivotal in terms of communicating to the citizens all that the City does.

Introduce the role of Application Team Manager: The Network/Operations team has a dedicated manager reporting to the CIO, whereas each of the Applications team members reports directly to the CIO. Given the complexity of the environment and the number of applications and projects supported, we believe the team would benefit from a full time manager to assist in workload leveling and prioritization, issue escalation, and project performance monitoring. The Application Team Manager will also have primary responsibility for the proposed Project Management Organization (PMO) and will therefore need to possess strong project management and training skills. The PMO is discussed further in the Project and Task Management and IT Governance Reporting section.

Monitor MMS improvements: While several areas of concern were initially noted around MMS services – including perceived quality issues, missed deadlines, low morale, and absenteeism – a number of recent changes have helped improve project delivery and morale. These include:

- Implemented staff changes and reorganization.
- Identified an on-call graphic artist to work during peak workload.
- Contracted graphic services for parks brochure production.
- Prepared Service Level Agreement.
- Developed internal tools to use when working with customers to set clear expectations around the work request, product, and timelines.

MMS staff is doing well; they feel good about work and they feel supported; there is a sincere desire and continued efforts to improve scheduling and customer service. . Also, the addition of a PIO will help the MMS group set priorities, which is expected to continue the upward trend in morale and effectiveness. The effect of these improvements should be monitored to ensure they continue to provide benefit.

Coordinate internal communications: *The need exists to disseminate information through various mechanisms within MMS – web, television, print. Currently there is no coordinated process to broadcast and circulate this information. The task of creating an organized process which follows Kirkland’s multi-media venues should be developed, implemented, and enforced under the direction of the new PIO.*

3.2.10 Project and Task Management and IT Governance Reporting

According to interviews with staff, the City of Kirkland’s IT projects are currently delivered to expectations. Despite satisfaction with current delivery, IT staff has acknowledged that adherence to initial project schedules and resource scheduling are currently a challenge. Staff availability (both IT and customer department) and project management workload are primary contributors. The additional workload posed by the pending annexation is expected to exacerbate current project delivery issues if new processes and tools are not in place to further leverage the current staff, plan resource allocation on projects, and provide additional visibility into the project portfolio.

Findings and Recommendations

Implement a standard delivery/project management process: *Project management approach and competency varies significantly across City departments and IT staff. We recommend an incremental implementation of appropriate and tailored process, methodology, and templates to assist the City with standardized metrics and common, teachable principles (see Exhibit 14). Specific aspects of project management/delivery are described in the Program Management Organization below.*

Implement a project governance body or Project Management Organization (PMO): *Kirkland currently uses the IT Steering Committee to review project progress on a periodic basis. We recommend extending this approach to include continual review of project priorities and high level project status (budget, schedule, risk, and resource availability). We also recommend that this team continue to review candidate projects for inclusion in the portfolio using the balanced scorecard technique introduced by this project.*

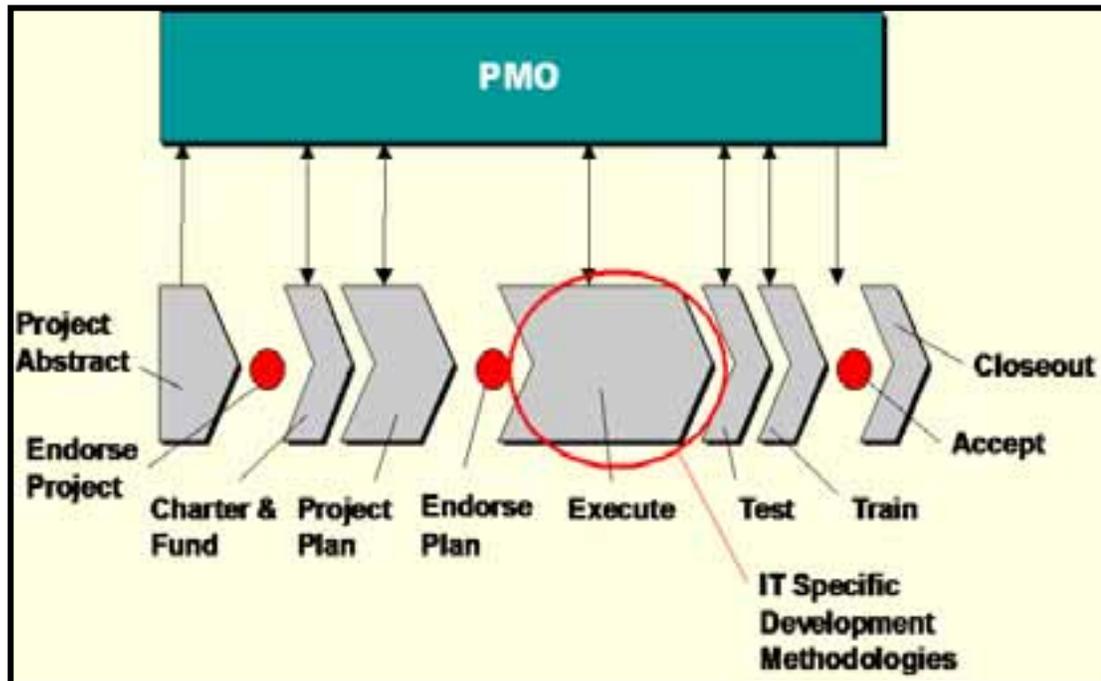
We believe that the key to successful implementation of a standard implementation methodology, as well as to an increase in quality, lies in implementation of a PMO. This may end up being the same Technology Steering Committee as it exists today, with additions to the charter of that body.

It is key that some form of project governance be put in place that determines what projects should be initiated, and monitors them during their lifecycle. This is important not only from the perspective of project quality, but also from that of providing project team members a point of escalation. The PMO should be chartered with three major responsibilities initially:

1. *Ownership and extension of the methodology, to include evaluation of leading project management practices as they relate to Kirkland*

2. Monitoring and review of projects for quality of execution as they relate to standards, particularly at common junctures such as initiation, planning, execution, test, and acceptance
3. Ongoing portfolio management and project prioritization

EXHIBIT 14. PMO PROCESS



While many Kirkland employees have a project management background, currently there are no standards in place at the City. The IT Strategic Planning team identified the following projects as required for implementing an effective project management process at Kirkland, organizing them under a Service Delivery Standards program.

1. **Create project management organization, methods, and tools, including:**
 - a) An IT PMO focused methodology, with tools and templates for key milestones and processes. The basis of this methodology should be consistent with industry practices and project management standards.
 - b) Project cost tracking standards, methods, and tools.
 - c) Refined process for project change control, particularly around CIP projects.
 - d) Standard project management training across the City for key participants, including resources expected to manage projects as well as those expected to sponsor them.
2. **Create project schedule tracking mechanism to give schedule performance visibility to project team and sponsors.** This should be scalable based on the scope, size, and

importance of the project. Exhibit 15 illustrates varying degrees of schedule tracking depending on the level of importance schedule performance and project type.

3. **Select and establish a common approach to requirements gathering and documentation, and train business and IT leads.** Goals of this effort should include ensuring traceability from requirements to use cases, features, and test scripts. There are many existing standards for the documentation of requirements. The challenge with requirements is that they often must be communicable to all parties involved in delivery from the (potentially) non-technical business customer to ultimately the vendors who respond to requests for proposals. Often times a business analyst can sit between these extremes and translate the language of the business to the technical language of the developers. However, even through translation, a common process must be followed in order to ensure that business needs are being satisfied.

4. **Select and establish a repository to store requirements that emerge outside of the context of a project or planning activity.** It would also be of value to decompose existing applications into functional requirements in order to ensure that existing applications are fully utilized where appropriate.

EXHIBIT 15. LEVELS OF SCHEDULE TRACKING

Schedule	Type of Project	Typical Dollar Value	Project Schedule Control Required	Suggested Tools	Time required for schedule management (set-up / update)
Schedule Performance Not an Issue	Feasibility / Scoping / Definition	< 100K	Minimum: Milestone schedule with bar chart	Visio	1 to 8 hours / 1 – 4 hours
“Normal” delivery schedule with minimum task / resource dependencies	Point Solution Development	Up to \$250K	Basic: Task-based schedule with start and finish dates for each task	Visio or Microsoft Project	1 – 12 hours / 1 – 6 hours
“Normal” delivery schedule with multiple task / resource dependencies	Enterprise Application Development / Major System Integration	\$250K to \$1M	Enhanced: Detailed, resource-loaded, activity-based schedule with hour estimates, start and finish dates and staff assignments for each activity.	Microsoft Project	24 – 40 hours / 8 – 12 hours

Accelerated Schedule	Mission Critical or Legally Mandated Infrastructure / System Project	\$250K to \$1M >	Enhanced: Detailed, resource-loaded, activity- based schedule with hour estimates, start and finish dates and staff assignments for each activity	Microsoft Project	24 – 40 hours / 8 – 12 hours
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3.2.11 Content Management

Trends in the industry points towards unified content management system strategies that consider both internally and externally accessible content. The City currently has a content management tool for the web. There are many policy as well as technical aspects to consider.

Findings and Recommendations

Develop an overall content management strategy with the PIO: *Many organizations have implemented unified content management systems which manage both internal and external access to documents and other content types.*

Continue implementation of the current Hummingbird System: *An enterprise electronic document management system (EDMS) will be a component of a larger content management strategy.*

3.2.13 Policies and Service Level Agreement

The existing IT Service Level Agreement was reviewed and was found to be complete and appropriate for the City's needs within the planning horizon.

4. IMPLEMENTATION PLAN

4.1 Project Prioritization Summary

The strategic planning team identified over 130 projects in the analysis phase. An initial review allowed the team to quickly reduce the number based on agreed upon major criteria (organizational readiness, internal capabilities and immediate needs). Those projects that did not pass the initial filter were retained on the list for future consideration. The final list included 64 projects. These are described briefly in section 4.2 and described in full in Appendix E.

The team then evaluated each project in light of the key criteria identified during the IT Balanced Scorecard Effort:

1. Increasing density while preserving Kirkland's character and sense of place
2. Doing more with less (efficiency and effectiveness)
3. Improve the effectiveness of communications with citizens
4. Implement systems as driven by state requirements or standardization between cities

The framework is one of a number of methods we used to prioritize opportunities. We consider it a tool to create a common understanding and consensus among the team on the prioritization criteria and to establish a process for objectively ranking the opportunities. Other factors affected how we put together the execution plan, including existing plans and schedules, logistics and expectations within City of Kirkland, and potential dependencies between opportunities that could affect the timing for initiation.

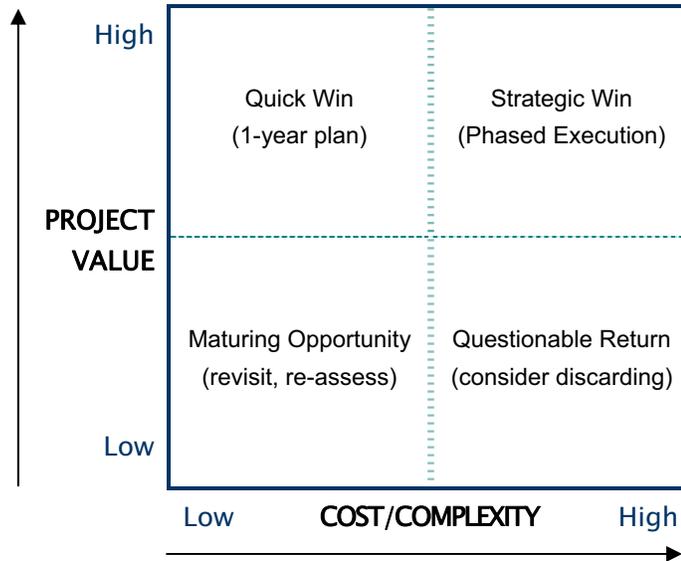
Following the definition of opportunities identified in discovery via workshops with departments and review of existing applications, we developed a prioritization framework to help us first make a quantitative assessment of the benefits, costs, and complexity of the opportunities. Based upon these quantitative results, qualitative judgment (reflecting real-world conditions) was applied to help create an implementation plan for completing the projects with demonstrated business value. Factors that went into qualitative judgment were project sequence and interdependencies, the opportunity for quick wins, and the availability of IT and City staff.

4.1.2 Scoring Matrix

We developed a two-dimensional scoring matrix for creating an Effort/Importance chart, or “Magic Quadrant,” commonly used to assess the strategic value of business opportunities.¹ We describe the “Importance” dimension or axis as “Business Value” and the “Effort” axis as “Complexity.” Simply put, complexity will make the successful execution of any opportunity more difficult, making the business value more uncertain the greater the complexity becomes. Based on the relative business value and complexity of each opportunity, we can graph all opportunities into four quadrants. Each quadrant indicates what kind of decision should be made about a given opportunity, as expressed in Exhibit 16.

¹ This methodology is commonly employed as a business analysis tool, e.g., by Gartner & Assoc. for market assessments. The methodology is not related to formally quantitative schemes such as multi-attribute decision theory.

EXHIBIT 16. INTERPRETATION OF PRIORITIZATION FRAMEWORK SCORES



4.1.3 Applications Criteria Definitions

We identified four criteria to contribute to the score for each axis, and gave each criterion a weighted value for its relative influence on business value or complexity. The criteria are based upon the incremental impact of the proposed opportunity, not the overall impact of the technology. The scoring for Applications Opportunities is as follows:

EXHIBIT 17. APPLICATIONS OPPORTUNITY SCORING SCHEME

Business Value Axis		
Criterion	Criterion Rank	Points
Sense of Place	1st	4
More with Less	2nd	3
Communications	3rd	2
Conformance	4th	1
Cost/Complexity Axis		
Criterion	Criterion Rank	Points
Cost*	1st	4
Resources	2nd	3
Uncertainty	3rd	2
Schedule	4th	1

*(<\$200K = Low, \$100K-\$400K = Medium, >\$400K = High)

4.1.4 Complexity Measures

1. Cost: We determined that cost was the number one driver of complexity at Kirkland in spite of the clear resource constraints to which the City is subject. The higher the cost, the larger the challenge for obtaining funding; cost drives time to implementation as well as the complexity of the funding mechanisms and the number of departments that must be involved to obtain funding.

2. Resources: City resources were continually identified as a major constraint. Short term load leveling is challenging for Kirkland given the City's approach to funding resources. Longer term, IT is able to load level, but this still involves negotiations across departments. We therefore ranked this as second in the complexity matrix.

3. Uncertainty: This criterion really belies the challenges of implementing a new product or technology at Kirkland in the current delivery environment. Delivery in and of itself has a degree of uncertainty due to lack of project management standards and governance. When new technology is added to that challenge, uncertainty is a clear criterion.

4. Schedule: In many environments, an aggressive schedule would drive the complexity of the project. At Kirkland, we believe the longer the project in duration, the more challenging. We have worked with the IT Applications team to create more projects with shorter durations in order to mitigate this by design.

4.1.5 Prioritization Formula

The placement of each opportunity in the magic quadrants below (exhibits 20 and 21) was achieved by rating the impact of each criterion on the opportunity in the following manner:

EXHIBIT 18. IMPACT RANKING

Impact	Points
High	3
Medium	2
Low	1

For each opportunity, the criterion's impact was multiplied by its weight, and the resulting scores added together for each dimension. It is very important to note that the rankings are in the context of macro-level City business value and complexity, as opposed to the business value and complexity for a specific department. Furthermore, the rankings identify the *incremental* benefit and complexity of migrating from the current tool(s) to the new opportunity.

The table below illustrates the scoring process for the CRM Project:

EXHIBIT 19. SCORING PROCESS

	Impact		Weight		Score
Sense of Place	Med (2)	x	4	=	8
More with Less	High (3)	x	3	=	9
Communications	High (3)	x	2	=	6
Conformance	Med (2)	x	1	=	2
Business Value Score					25
Cost	Med (2)	x	4	=	8
Resources	Med (3)	x	3	=	9
Uncertainty	Med (2)	x	2	=	4
Schedule	Med (2)	x	1	=	2
Complexity Score					23

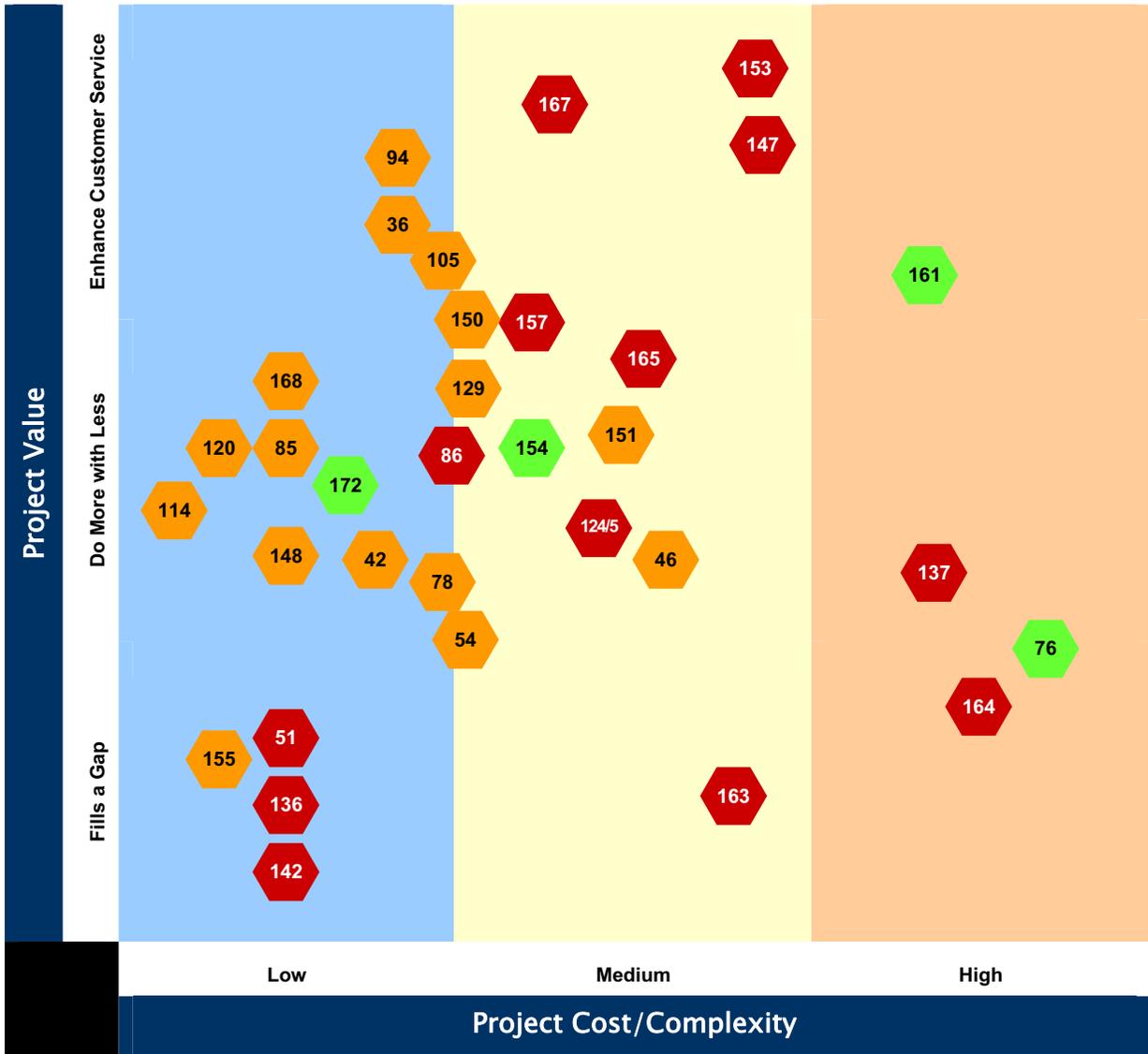
4.1.6 Prioritization Overrides

There were three cases for which projects were separated from the project portfolio because they are considered in progress/substantially complete, not optional, the opportunity cost for **not doing** the project clearly exceeds the associated costs, or the project was small enough that project prioritization was considered unnecessary. The first case is the “In Flight” project that is already underway with committed funds and deliverables. The second case is the “Must Do It” project. These projects are either mandated (by regulation or otherwise) or commitments have already been made via regional organizations (such as eGov). The third case is the “Just Do It” project that represents “quick wins” which can be quickly initiated and delivered when resources are available.

4.1.7 Results

Through the ranking process, the project portfolio – as well as In Flight, Must Do, and Just Do It projects – received points based on their value and complexity. The two project sets – the portfolio, and the In Flight-Must Do-Just Do It projects – were then plotted on quasi magic quadrant diagrams to show their relation to one another. These diagrams are included as exhibits 20 and 21. The numbers in the symbols denote the project’s tracking number. The y-axis of these diagrams reflects two value scales. The Project Value scale presents the values resulting from the scoring formula described above. The “Fills a Gap / Do More with Less / Enhance Customer Service” scale represents qualitative ratings performed by a team of IT and department staff. These represent refinements of the Project Value scores.

EXHIBIT 20. IN FLIGHT, MUST DO, AND JUST DO IT PROJECTS



888 In Flight

888 Must Do

888 Just Do It

- ◆ 76 Document Management
- ◆ 154 IFAS 7i: HR/Finance System Web-based Client
- ◆ 161 Mobile Remote Access for Field Operations
- ◆ 172 Intranet Upgrade
- ◆ 51 Probation Management System
- ◆ 86 Software License Tracking
- ◆ 124/5 Electronic Ticketing & Accidents

- ◆ 36 Regional Vendor Mgmt
- ◆ 42 Volunteer and Commission Membership Tracking
- ◆ 46 Mobile Remote Access Strategy
- ◆ 54 Issue Management Process
- ◆ 78 Photograph Library
- ◆ 85 Project Schedule Tracking
- ◆ 94 Facilities Scheduling
- ◆ 105 Install additional web cams for high-use facilities

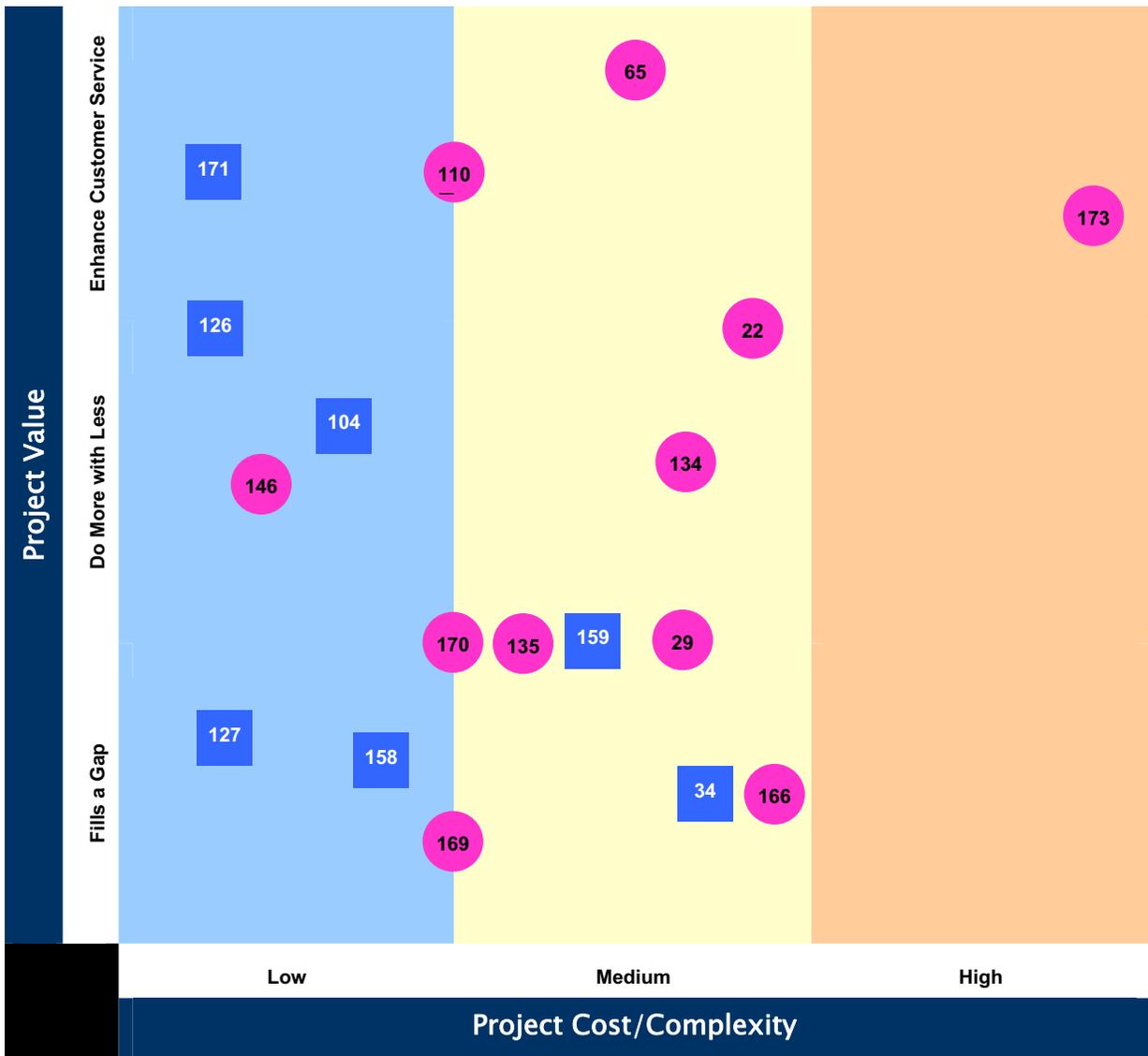
- ◆ 136 Internal Affairs
- ◆ 137 Digital Voice Recording System
- ◆ 142 JBRS
- ◆ 147 MyParksandRecreation.com
- ◆ 153 MyBuildingPermit.com

- ◆ 157 Recruitment Process Analysis & Application Online Implementation
- ◆ 163 Hansen Upgrade
- ◆ 164 Permit System Replacement
- ◆ 165 Norcom Regional Public Safety Technology Study
- ◆ 167 NWProperty.net

- ◆ 114 Create web stat reporting method and tools
- ◆ 120 Hansen Workflow
- ◆ 129 WACIC Interface
- ◆ 148 HR Forms Workflow
- ◆ 150 Career Development Process & Automation
- ◆ 151 Salary Surveys Online

- ◆ 155 Employee Provisioning Checklist
- ◆ 168 DISCIS Integration Discovery

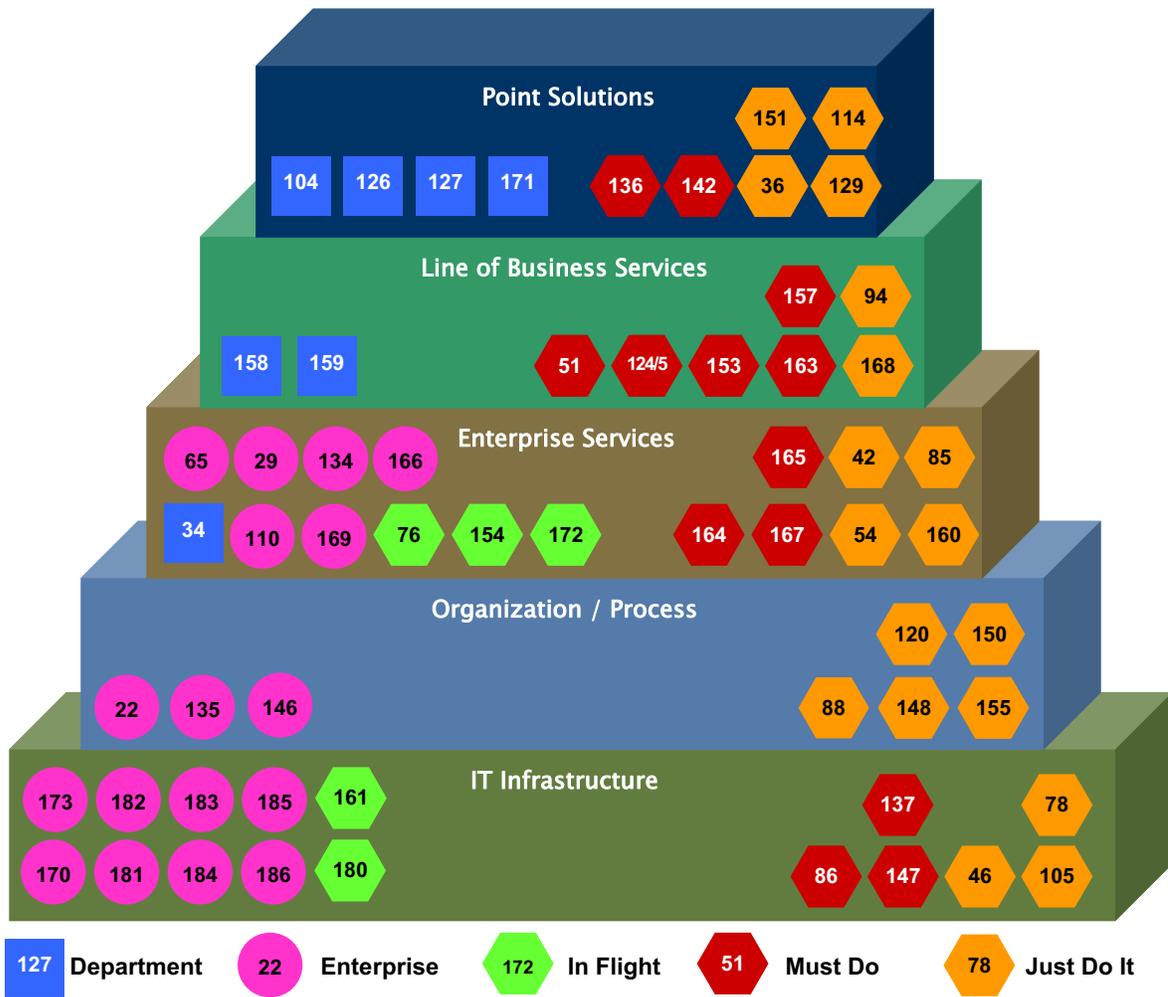
EXHIBIT 21. PROJECT PORTFOLIO



- | | |
|--|---|
| <ul style="list-style-type: none"> ■ 34 Position Management ■ 104 Refine Parks Work Order Process ■ 126 Online citizen incident reporting ■ 127 Pawns Downloads ■ 158 Fire Inspection implementation ■ 159 In-Car Mapping ■ 171 Online court payments | <ul style="list-style-type: none"> ● 22 Permit Process Mapping ● 29 Receivable Integration ● 65 CRM Project ● 110 Virtual Kirkland Geospatial Model ● 134 Staff Scheduling ● 135 Capital Budgeting Process ● 146 Employee Status Change Process Analysis & Automation ● 166 NWMaps.net ● 169 Electronic archival system for all email ● 170 Standard Reporting Tool ● 173 Disaster Recovery Planning |
|--|---|

The enterprise impact of the projects were plotted (see Exhibit 21) to illustrate the focus of the projects – whether they would impact a single division, or the entire enterprise. The bulk of the projects fall under enterprise-level projects with far reaching effects.

EXHIBIT 22. CITY OF KIRKLAND IT ENTERPRISE ARCHITECTURE



- | | |
|--|---|
| 76 Document Management | 36 Regional Vendor Mgmt |
| 154 IFAS 7i: HR/Finance System Web-based Client | 42 Volunteer and Commission Membership Tracking |
| 161 Mobile Remote Access for Field Operations | 46 Mobile Remote Access Strategy |
| 172 Intranet Upgrade | 54 Issue Management Process |
| 180 Storage Solution | |
| 51 Probation Management System | 78 Photograph Library |
| 86 Software License Tracking | 85 Project Schedule Tracking |
| 124/5 Electronic Ticketing & Accidents | 94 Facilities Scheduling |
| 136 Internal Affairs | 105 Install additional web cams for high-use facilities |
| 137 Digital Voice Recording System | 114 Create web stat reporting method and tools |
| 142 JBRS | 120 Hansen Workflow |
| 147 MyParksandRecreation.com | 129 WACIC Interface |
| 153 MyBuildingPermit.com | 148 HR Forms Workflow |
| 157 Recruitment Process Analysis & Application Online Implementation | 150 Career Development Process & Automation |
| 163 Hansen Upgrade | 151 Salary Surveys Online |
| 164 Permit System Replacement | 155 Employee Provisioning Checklist |

- 165 Norcom Regional Public Safety Technology Study
- 167 NWProperty.net
- 34 Position Management
- 104 Refine Parks Work Order Process
- 126 Online citizen incident reporting
- 127 Pawns Downloads
- 158 Fire Inspection implementation
- 159 In-Car Mapping
- 171 Online court payments
- 160 Mobile Device Content
- 168 DISCIS Integration Discovery
- 22 Permit Process Mapping
- 29 Receivable Integration
- 65 CRM Project
- 110 Virtual Kirkland Geospatial Model
- 134 Staff Scheduling
- 135 Capital Budgeting Process
- 146 Employee Status Change Process Analysis & Automation
- 166 NWMaps.net
- 169 Electronic archival system for all email
- 170 Standard Reporting Tool
- 173 Disaster Recovery Planning
- 181 City Hall Core Network Improvements
- 182 Bellevue/Kirkland Datacenter link
- 183 Automated Monitoring Solution Improvements
- 184 Server Virtualization
- 185 Tape Backup System Improvements
- 186 Cisco Call Manager redundancy improvements

4.2 Staffing and Organizational Projects Summary

The following projects address process and people needs for continued IT excellence and incremental improvements at the City of Kirkland.

4.2.1 Permit Process Mapping

What is the Project?

Perform detailed review of all permitting processes, workflow, roles and responsibilities and create a more streamlined workflow in order to support one permit entry point for the public. Plan a permit process that is scalable for annexation. Provide permits that are accessible by both geospatial queries and requestor. This may be accomplished either via GIS integration to Advantage, or via a spatially enabled document management system. Implement electronic workflow for permit review. Coordination with document management will be required.

Benefits of the Project:

Improve customer service by streamlining the permit application and processing process. This includes easily accessible permit application point or points of entry, the ability to follow the status of the permit, and an efficient and customer centric permit issuing procedure.

4.2.2 Position Management

What is the Project?

Provide better automation through implementation of IFAS Position Budgeting. One purpose of the Position Budgeting (PB) system is to create a personnel budget for the next fiscal year. The budget will be based on existing data from the Human Resource (HR) and Payroll (PY) systems. The data is imported into a "model" and several models may be in use simultaneously. The PB system provides very flexible utilities that enable the imported data to be manipulated using multiple variables for COLAs, benefits and other personnel assumptions. Since the HR and PY data is imported into the PB system there is no danger of affecting live HR or PY data.

Proposed solution would be to implement the Finance/HRIS IFAS system Position Budgeting module which we already own and which is included in our annual software support costs. Personnel data can be imported into the PB model and manipulated for global and specific changes and reported on using CDD Reports.

Benefits of the Project:

- Perform budget checks prior to posting a new position.
- Better budget modeling of changes to personnel, COLA and benefit increases, etc.
- Better personnel reporting.

4.2.3 Mobile Remote Access Strategy

What is the Project?

Develop a city-wide mobile strategy. For example, to what extent do we want to provide mobile systems, and how we will maintain connectivity?

There are currently funded in-flight mobility projects to provide GIS connectivity in the field and for field inspectors in public works and building. The City already provides mobility solutions for Police and Fire (Fire's are managed by the City of Bellevue, who also dispatches Fire).

This project is to define the strategy for both current, funded, and unfunded wireless mobility needs. Unfunded mobility projects include providing photographic and complaints data to code enforcement officers via mobile technology, Mobile fire inspections, and field time entry for Public Works & Parks crews. The strategy should include function to automate, tools for automation, wireless infrastructure, estimated costs for implementation and support, and ongoing governance strategies designed to encourage technical flexibility.

Benefits of the Project:

Pull together disparate mobility projects into a single, cohesive strategy.

4.2.4 Issue Management Process

What is the Project?

Develop enterprise process and workflow for tracking and reporting progress on city projects to the CMO, City Manager and council

Benefits of the Project:

- One single source for status of city projects
- Able to easily see at a glance progress and status on city projects
- Uncover impacts, synergies or efficiencies of projects by seeing them side-by-side

4.2.5 Requirements Gathering Methodology

What is the Project?

Research IT best practices in requirements gathering and documentation methodology, select a common and proven practice(s), and provide training to IT Applications Division Staff.

Benefits of the Project:

- IT will be able to perform more complete and thorough analysis of requirements
- IT staff will be more interchangeable across projects

4.2.6 Facilities Scheduling

What is the Project?

Fully implement Class Facilities module. This does not include sharing with the schools which would require further study of the costs and complexity.

Benefits of the Project:

- Shareable facility scheduling
- Customers could see availability of facilities online

4.2.7 Capital Budgeting Process

What is the Project?

Perform discovery project to review capital budgeting process. Provide a refined process for project change control, particularly around CIP projects.

Possible solutions include better definition of JL use for Project Budgets, using existing IFAS Budget import or having a custom interface designed. Additional CDD report writing for analysis functions that are currently performed manually.

Benefits of the Project:

- More budget staff time to work on higher level tasks
- Departments will have better information about their capital budgets.

4.2.8 Employee Status Change Process Analysis & Automation

What is the Project?

Review and refine the workflow surrounding employee status changes. Define the as-is Employee Status Change Process (includes hires, step increases, position changes and terms (including volunteer hiring/terms) – anything that currently uses the Personnel Action Form (PAF). Include reviewing the impact to departments besides HR/Payroll in the process including IT, Facilities. Analyze areas for improvement and how technology can assist with automation including the use of workflow.

Possible solutions include using either the Document Management workflow and/or the workflow tool in IFAS 7i to route information/data regarding employee status changes. Investigate triggers that can be put in place that kickoff a workflow process for known employee changes (such as step increases). For employee benefit elections investigate providing employees with a web form for making benefit elections and importing that data to the HR/Finance (IFAS) system to avoid data-entry errors and redundancy. Create reports for items currently hand-written on the PAFs that have translations to meaningful information for all participants (instead of two-letter codes) and can be routed for review and approval. Possible changes or improvements to notifications/workflow for IT/Facilities regarding certain employee changes.

Benefits of the Project:

- Improved understanding of how we process employee changes including new hires, terminations and employee status changes and where responsibilities lie;
- Reduce errors and missed deadlines (such as step increases);
- Reduce redundant data-entry and completion of four-part forms;
- Accelerate the routing of employee change information; and
- Improve efficiency in the process to meet payroll deadlines.

4.2.9 HR Forms Workflow

What is the Project?

Define workflow for Employee Online changes that require forms and redirect the user directly to the appropriate form when they make a change.

Benefits of the Project:

Potentially, improved completion of HR forms when making a change in Employee Online.

4.2.10 Career Development Process & Automation

What is the Project?

Provide tracking vehicle and reporting for established Succession Planning & Organizational trainings to be tracked by HR staff.

Possible solution is to use the existing Finance/HRIS IFAS System: HR Education and Skills module. CDD reports would then be created using data from the module.

Also provide employees a self-service tracking mechanism for tracking trainings that do not fit under mandatory or succession planning training, through Employee Online.

Possible solution is to use the existing Employee Online HRIS database used for tracking wellness miles by adding tables, relationships, stored procedures and reports for employee trainings.

Benefits of the Project:

- Improved analysis of our succession planning information.
- Clear communication to employees of what competencies and trainings are required for a position.
- Additional tools to augment the capture of data for the evaluation process.
- Avoid leaving a vacuum when a manager or director retires, leaves or is promoted by having a tool to review our progress in bringing line staff up through the ranks.
- Improve employee morale and retention by having key measurements of where they are in their career development and where they fit into the city's succession plan.

4.2.11 Employee Provisioning Checklist

What is the Project?

Examine and document the types of items provisioned to employees that must be retrieved upon employee termination. Provide centralized database for collection of all items provisioned to an employee (keys, access cards, computers etc.). Including a report of items by employee to be used as a checklist during an employee exit interview. Provide tools and process for HR to take-over the issuance of Employee ID cards.

Possible solution: Use the existing HR_EQUIPMENT screen of the Finance/HRIS IFAS system HR module. Create CDD reports off of the data for check lists. Would need to train a representative from each department on data-entry to HR_EQUIPMENT screen and configure security.

Benefits of the Project:

- Documentation of all items provisioned to an employee during employment;
- Checklist of items to be retrieved from employee during exit interview;

4.2.12 Norcom Regional Public Safety Technology Study

What is the Project?

Perform a technology study to determine:

- If one of our existing CAD/RMS/Mobile solutions meets Norcom's needs (Kirkland's existing system, Bellevue's existing system, or other systems that may be used by agencies that commit to Norcom).

- Analyze the peripheral but linked systems such as Jail, evidence tracking, etc. Develop a strategy for these systems.
- Select the system to implement. This particular project is currently identified as done at system selection.

Benefits of the Project:

- Norcom itself is expected to provide better coordination between police and fire dispatch, an improved governance structure for Fire dispatch, long term significant cost avoidance.
- This study will inform the final go/no go decision with a good estimate for technology costs in a combined dispatch center.

4.3 Application Projects Summary

4.3.1 Receivable Integration

What is the Project?

Document the Accounts Receivable process for each department that currently deals with receivables. Define requirements for an Accounts Receivable system. Implement a centralized AR system (potentially Springbrook) with refined AR processes. Provide automated posting to IFAS.

Benefits of the Project:

- Ability track City-wide AR in one place/application
- Improved ability to track and enforce late payments
- Improved accounting controls for AR
- Improved IFAS implementation through direct link to new AR system
- Establishing a City-wide AR policy

4.3.2 Regional Vendor Management

What is the Project?

Provide a regional online vendor registration form where vendors can register with one or more municipalities. The shared list can be published twice annually as required by RCW and the regional participants can share in the publishing costs instead of paying for them separately.

Possible solution is to create a web form vendors can sign that is attached to a database. That data can then be imported into IFAS to the Person/Entity (PE) module for use in the vendor/PO process.

Benefits of the Project:

- Compliance with the RCW;
- Reduced advertising cost; and
- Reduce Purchasing staff time taking phone calls and meeting with cold-call vendors regarding vendor sign-up.

4.3.3 Volunteer and Commission Membership Tracking

What is the Project?

Need to perform an analysis of what information different departments collect on their volunteers. Provide a centrally managed system that tracks key information on volunteers. Key requirements are flexibility in information provided and in role description. System must also secure personal information.

Possible solution is to enter volunteers in the Finance/HRIS IFAS system as employees without a pay screen. This would fold volunteers into the Employee Change process providing triggers for when they arrive and depart. Existing CDD reports that run off of employee data would need to be modified to exclude volunteers. New CDD reports would need to be created to track and analyze volunteer information. With these reports we may be able to add the ability to search for volunteers, including providing a web page so that departments could view the pool of volunteers available.

Benefits of the Project:

- Increased security of City of Kirkland data and physical access;
- More efficient L&I reporting for Payroll;
- Consistent City of Kirkland approach to managing volunteers; and
- Improved visibility of available volunteers.

4.3.4 Probation Management System

What is the Project?

Replace current Probation Management System (PMS), which is an Access database, with a more secure system that allows for remote access by probation officers. Perform requirements analysis and select a new Probation system that meets those requirements. Implement the selected system.

Benefits of the Project:

- Secure probationer data in compliance with federal regulations;
- Probation Officers may have enhanced functionality and reporting; and

- System that can be supported by the Applications group of the IT department.

4.3.5 CRM Project

What is the Project?

The general feedback City of Kirkland receives from constituents is that we are very customer-service oriented and do a good job of responding to inquiries and needs. However, we have no means of objectively measuring our service levels and the information regarding inquiries varies by department. We also have no means for determining if inquiries receive any response, or if similar inquiries consistently receive the same response, or the amount of time it takes to fulfill a request. It would be helpful to analyze our current processes for constituent inquiries and determine what CRM solutions would be beneficial in improving our ability to respond to inquiries and issues and in capturing objective measures in this area.

Since this is a large project it is broken into phases:

Phase I: Perform cross-departmental discovery project on how constituent inquiries are addressed and resolved including length of time from inquiry to completion, methods of tracking the inquiry and successful completion rate. Include information regarding frequently asked questions and correct responses. Create a CRM Focus Team. Upon completion, each functional area should have a completed Business Process Mapping of their inquiry process.

Phase II: Create a searchable knowledge base of frequently asked questions for use on the Internet and Intranet (COK employees can use to respond to phone inquiries). Knowledge base should be updatable by COK employees and should include reporting to determine frequency of use by Internet users. Investigate feasibility of multi-lingual translation of FAQs.

Phase III: Investigate electronic survey of constituents. Document requirements of electronic surveys and determine if vendor solution can meet the requirements or if internal staff/current technology can be utilized.

Phase IV: Create web forms that allow constituents to submit service requests electronically.

Document requirements for electronic service request web forms. Determine if a vendor solution can meet this need or if internal staff/current technology can be utilized. Investigate feasibility of multi-lingual translation of web forms.

Benefits of the Project:

Phase I:

- A comprehensive analysis of our current constituent inquiry processes.
- Documentation of frequently asked questions/responses.

Phase II:

- Improve constituent self-service by providing an easily searchable knowledge base.

- Analyze trends of information accessed.

Phase III:

- A documented approach to performing electronic surveys.

Phase IV:

- Provide multiple methods for constituents to access information and submit service requests (i.e. phone, web, in-person).
- Analyze trends in service requests.

4.3.7 Document Management

What is the Project?

Implement a Document and Records Management System

Benefits of the Project:

- Address legal requirements for document retention/disposition
- Dramatically reduce staff time searching for documents
- Reduce number of lost documents

4.3.8 Photograph Library

What is the Project?

Provide photograph library that is accessible and searchable by subject and description to city staff. City needs to find digital asset management software; purchase; deploy then import and categorize all of the assets so users can search and find needed files.

Benefits of the Project:

- Better access to city photo and digital assets
- Ability to search assets
- More control over staff use of “approved” assets
- Protect integrity of assets by securing the image originals
- Organizational policy on photos library

4.3.9 Project Schedule Tracking

What is the Project?

Determine complete requirements and then do a make/buy analysis. Include additional analysis of whether or not Clientele can meet needs and whether or not there is a system that will meet project tracking and Help Desk needs. Either develop or purchase the system.

Benefits of the Project:

- Ability to more accurately understand what IT staff are working on
- Better visibility to IT backlog
- Management tools to allow better resource allocation
- Communication tool for IT customers
- Improve ability to quickly locate original work associated with a project (maps, graphics, etc.)

4.3.10 Software License Tracking

What is the Project?

Create a centralized database for tracking licenses, including "check out" to specific users where appropriate, renewal dates, seats and maintenance.

Poll user community and/or procurement for software packages in use but purchased by individual departments. Update License Tracking database and Clientele.

Benefits of the Project:

Reduce costs

4.3.11 Refine Parks Work Order Process

What is the Project?

Review the current work order process and tools and determine if refinements can be made that would reduce the amount of redundant entry and handoffs. Ideally, Parks would start using our existing asset management and work order system, Hansen.

Benefits of the Project:

- Allow Parks to more easily track and cost work orders
- Allow Parks to schedule preventative maintenance
- Allow Parks to track costs for equipment, materials, man hours and so on
- Allow Parks to transfer work order man hours to Tenrox (see related project)

- Allow Parks to keep an electronic inventory

4.3.12 Virtual Kirkland Geospatial Model

What is the Project?

The 2005 GIS Strategic Plan identified “3D GIS” as one of the Phase II GIS implementation projects. The project will create a virtual model of the city, or parts of the city, using digital terrain models, building footprints, tree inventory, building textures, window treatments, sidewalks, and other layers to demonstrate how a development (e.g., a new commercial or office building) or policy (e.g., Zoning Code, Comprehensive Plan, etc.) will impact the city.

This will allow City staff and citizens to visualize in three dimensions the impact of a new development in the city, and may also show changes over time. A free viewer will need to be installed/downloaded on each user’s PC to enable the 3D view.

Benefits of the Project:

Internal

Project-based- This enables better decision making from a planning and development perspective prior to issuing permits, acquiring new land for a park, revising code, and so on. The overall benefit is to enhance decision making capabilities by visualizing the impacts that the built environment will have in critical city objectives (density, character of built environment, view lines, trail linkages, etc.) before issuing permits and starting development.

Policy based- This enables better decision making from a planning and development policy standpoint. For example, it allows scenario visualization such as: What are the impacts of a code/zoning change? What are the impacts of no change? What is the effect on density?

External

A significant benefit of this project is that it will allow the City to communicate with citizens exactly what they can expect from a particular development, zoning change, traffic project etc. This is key to accommodating the expected growth required by the State Growth Management Act while dealing with an engaged and interested community concerned with changes to the city, particularly with respect to the unique feel and character of an area like downtown, as well as the development potential for areas like Totem Lake and the N.E. 85th Street corridor.

4.3.13 Create web stat reporting method and tools

What is the Project?

Create web stat reporting method and tools in order to determine how effective and/or popular certain pages are, and to monitor effectiveness of delivery. This would be achieved through an enterprise level reporting tool such as Webtrends

Benefits of the Project:

- Better access to web site statistics
- Better access to custom reporting options
- Increase city site visitor/citizen satisfaction through web analytics

4.3.14 Hansen Workflow

What is the Project?

Automated email notifications sent by Hansen and Advantage to notify appropriate personnel when an event, such as a customer service request, completed work order or water meter installation, had occurred. These email notifications will be accomplished using database triggers within the application database. Also, the processes (customer service, work order, water meter) will be analyzed and documented to establish when, and to whom the emails should be sent.

Benefits of the Project:

Customer Service and Work Order (Hansen)

- Improve customer service by quickly delivery service requests to the appropriate employees
- Help management to better monitor work progress through work order completions
- Help management to schedule work crews

Utility Billing (Advantage)

- Help Utility Billing to better monitor and create new UB accounts
- Improve customer service by enabling UB to start billing on the proper date
- Improve UB account creation consistency (previously done from various inconsistent sources)

4.3.15 Electronic Ticketing and Accidents

What is the Project?

Tickets and traffic accidents are currently written on paper forms by police officers and must be hand-entered into multiple systems in the City (New World by Police and DISCIS by Court) and various state entities. However, there is a strong desire to reduce redundant work in the City, and this will become even more important with increased volumes which will result from annexation.

SECTOR is a software application developed by the state to automate and streamline the collection of this data. The software creates tickets and accident reports electronically, and electronically transmits them to the City and then to all of the other entities that require the data. It will be provided free to police agencies. It is not required by the State Patrol; we are free to implement a different

solution, such as the New World Mobile Accident module with the APS ticket interface that sends data to the SECTOR database.

Project Details

- Meet with Washington New World customers to decide on a joint project. Develop specs for New World interface and submit to New World for programming, perhaps leveraging the existing Mobile Merge process.
- Implement electronic ticketing and accidents in the police cars and for motorcycle officers on our current hardware and wireless connections. Add barcode readers for collecting driver and vehicle information, and thermal printers for printing tickets in the field.
- Install SECTOR repository and New World interface.
- Data from mobiles will be uploaded with one of two methods: either to a SECTOR repository at the City, from which it will be transmitted to the state and sent to the New World database; or to a location on the City network where it would be imported into New World, then sent to the SECTOR database, which would then send it to the state.

Benefits of the Project:

Single point of entry for ticket and accident data that electronically flows to all of the other entities that require it. Elimination of the current lag time in populating the databases throughout the PD and other agencies that use it.

4.3.16 Online citizen incident reporting

What is the Project?

The police department would like to implement a web-based reporting tool for its citizens to report certain types of incidents (such as lost property requiring a police report for insurance, theft from vehicle, vandalism, harassing phone calls, shoplifting at businesses) on-line instead of having to come to the police department, or wait for an officer to come to their homes. Many police departments in the area are implementing this functionality, and it is just a matter of time before Kirkland's web-savvy residents are asking for it.

Coplogic's online reporting software works with New World's mobile merge software to import the data into the New World system, building on existing technology with which users are already familiar.

Benefits of the Project:

This will provide another way for citizens to interact with the police department, and also has the potential of freeing officer time for higher priority calls.

4.3.17 Pawns Downloads

What is the Project?

Pawnshops typically have their own software into which they input all pawn transactions. Many pawnshops also submit their data electronically to a national clearing house called LEADS Online. However, they have to submit all pawns slips to the Kirkland Police department on paper, which are then input into New World manually, if they get entered at all.

The police department would like an application they could use to import pawn data from electronic files from either the pawnshops or from LEADS Online, or both. This would be additional functionality of the New World system.

Benefits of the Project:

This would eliminate the many pieces of paperwork that would have to be searched through to locate a record, which have to be manually input into both WACIC and New World.

4.3.18 WACIC Interface

What is the Project?

The police department is required to input several types of records into the WACIC system run by the State Patrol, including pawns, stolen property, wants and warrants, etc. They also need to enter this data into the New World system for reporting and analysis.

Currently most of this data is only being entered into WACIC because there are not enough staff to do the duplicate data entry. This leaves large gaps in our ability to analyze this data, for example, we cannot try to match pawned items against stolen items.

New World's "on-line" modules take the data entered into the New World system and automatically send it to the WACIC system, eliminating the need to enter that data twice.

Benefits of the Project:

More complete records in New World and no duplicate data entry.

4.3.19 Electronic Bookings

What is the Project?

Install an application (to be provided by King County Jail) that creates the booking data to book inmates into King County jail. The KC jail will eventually require customers that book prisoners to use this app. This application will replace the current manual forms based workflow. Expect to install a secured, web-based application to include certificates; application will be available on wireless-connected mobile computers as well as station.

Benefits of the Project:

Allow corrections and arresting officers to write up Superforms (booking forms) and send to King County electronically before delivering prisoners. Allows pre-approval process by internal supervisors and pre-screening of prisoners for acceptance at KC Jail. Will result in faster processing of prisoners, getting officers back on the street more quickly. The data will also be available to the prosecutors, which will eliminate the need to send them hard copy or electronic copies.

4.3.20 Staff Scheduling

What is the Project?

Fire and Police are currently using far from optimal tools for scheduling staff, including a paper system in the Police department and a component of FireRMS in the Fire department. Staff spends a lot of time creating and maintaining the schedules, and they duplicate effort to get the historical information into the City's time-keeping system. Callouts for emergency coverage or backfilling are done manually with limited or poor information on staff availability or eligibility. The departments have little or no management reporting capabilities. Timekeepers must manually enter timekeeping data for close to 200 employees into Tenrox.

Fire and Police (and possibly Parks and Public Works) need a staff scheduling tool that takes into account their complex business rules for scheduling backfill, over time, training, time-off, etc. There is also a significant need for management reporting. The departments want an automated tool that will be available 24X7 (as their personnel are deployed) that can contact personnel via telephone, pager, or email, and be available for response by the users by telephone or Web. They also want a tool that will interface or provide data electronically to their other systems (Tenrox timekeeping, FireRMS, and New World CAD) to eliminate the effort and potential errors of duplicate data entry. Finally, a key desired feature is the system's ability to automate callouts in an emergency or disaster situation, allowing the battalion chief or police command staff to deal with the emergency instead of staffing issues.

We used information from Telestaff, a leading scheduling application in the public safety arena, to develop the costs for this project. It's likely this software can provide the capabilities needed, as well as interfaces to our existing systems. Other public safety agencies in the area (including Bellevue) use the software, giving Kirkland the potential to piggyback on their contracts and to leverage our implementation using some of their business rule definition. We will ask this vendor to bid on the project.

Project Implementation:

- Document requirements and business processes in detail
- Develop and release RFP
- Develop detailed demonstration scenario to verify that software meets the requirements and can handle business rules
- Demo software of vendors who meet the criteria of the RFP
- Site visit to customers for further verification

- Negotiate contract, or piggyback on other agency's contract
- System installation at Kirkland
- Local web-based training for system administrators
- Configuration training at vendor site (2 fire, 2 police, 2 IT)
- Interface development and installation
- On-site by vendor for configuration tuning
- User training by in-house trainers

Benefits of the Project:

- Accurate personnel schedules with automated information flow to other systems, reducing staff time needed to develop schedules and duplicate data entry
- Easily accessible tool for end users

4.3.21 Internal Affairs

What is the Project?

Currently the police department tracks complaints about officers and internal investigations on paper and/or in Word documents, and they use "drop files" to file them. This system does not allow any visibility on potential problems, it is purely reactionary.

IAPro software is widely used in the U.S. by many big police departments. In addition to organizing data all in one place and allowing analysis of the data, the system will proactively alert the administration when they have an officer who might be having some problems. The web-based component will allow individuals who take complaints to enter them immediately into the system with access to just a browser (for example, data could be entered by supervisors in the field).

Benefits of the Project:

The system would proactively alert the police administration to, and to allow them to intervene in, errant behavior by officers before it becomes a liability to the police department or the City.

4.3.22 JBRS

What is the Project?

Implement a jail data sharing interface required by WASPC, to include all jails in Washington. This system will allow police to see who is serving time in any jail in the state, as well as provide national VINE (victim notification) data.

APPRISS is the vendor WASPC has selected to provide the jail data sharing and victim notification software (lets crime victims know when the offender is out of jail). This vendor is already familiar with the New World data dictionary and has set up other jails around the country with the same type of system. APPRISS will provide a set of queries to pull the data onto a PC that they will provide. The data will then be sent via FTP to APPRISS, which they will then use to populate JBRS and VINE.

APPRISS will need an up-to-date copy of the live New World database to extract data on inmates, so IT will set up a log shipping server to provide the data without affecting performance on the live server.

Benefits of the Project:

State-wide data sharing of jail data and victim notification of released offenders.

4.3.23 MyParksandRecreation.com

What is the Project?

Develop parks, trails and facilities listings, site design and content update, add event calendar.

Benefits of the Project:

- Single online source for regional information about parks and recreation opportunities
- Allows citizens to search and find availability of classes across the region, connect to City sites to register for recreation classes
- Particular work this year is to integrate parks, facilities, and trails information for the region with search functionality and GIS component

4.3.24 Salary Surveys Online

What is the Project?

Provide collaboration site for regional HR directors - salary data by job/position code, benefits data etc. Must develop requirements, standards for data uploads and commitment from eGov alliance members to utilize proposed tool.

Possible solutions include either a Sharepoint site or SQL database with web forms.

Benefits of the Project:

- Less time spent by HR staff collecting salary and position information in person.

4.3.25 MyBuildingPermit.com

What is the Project?

Phase 4 of the www.mybuildingpermit.net, shared eCityGov Alliance website development. Building on the successes of phase 1 (basic permit application) and 2 (permit status checking) and the progress of Phase 3 (inspection requests), phase 4 is the expansion of phase 1 to allow citizens to apply for more advanced permit types. The current website is limited to very basic permits, electrical, low voltage, mechanical, plumbing, and re-roofs, that do not require plans. One of the features of phase 4 is to implement a way for citizens/contractors to “upload” plans in electronic form. This feature will allow users to apply for more complex permits using www.mybuildingpermit.net.

Benefits of the Project:

- Single place to purchase permits for one to many cities with a single transaction
- Web-based permit scheduling will save contractor and city staff time
- Web-based status check will save contractor and city staff time
- Reduces trips to city hall for routine business
- Continued expansion of award winning eCityGov Alliance project
- Allow the submission of electronic documents as part of the permit application process
- Expand the types and complexity of permits that can be applied for
- Further reduction in workload on permit technicians through automation
- Improved permit data quality by automatically inserting permit data into the permit system, rather than re-typing it in

4.3.26 IFAS 7i: HR/Finance System Web-based Client

What is the Project?

Upgrade to IFAS 7(i); providing better user experience with client application and augmenting HR/Finance processes with Workflow.

Benefits of the Project:

- Improve Finance system user-experience.
- Reduce training and new user learning curve.
- Increase process automation via workflow.
- Decrease need to install and configure client application on each Finance system user's desktop.
- Increased user data-entry productivity with the ability to rearrange forms to fit data-entry workflow.

- Eliminate additional bank reconciliation software (Quicken) through use of Bank Reconciliation implementation.
- Improve reporting of daily cash balance through use of Bank Reconciliation module.

4.3.27 Recruitment Process Analysis & Application Online Implementation

What is the Project?

Phase I: Define the as-is Recruitment Process (including applicant tracking, funding, desired competencies, salary planning, requisition, candidate acquisition, interview process, hire process, EEO/AA reporting etc.). Analyze areas for improvement and how technology can assist with automation.

Phase II: Define requirements for Application Online system. Perform a selection project for Application Online (with regional members). Implement selected Application Online solution.

The proposed solution is to partner with the City of Bellevue using their in-house customized web-based applicant online system. The City of Bellevue system has been in use for several years and has received praise for its ease of use and for capturing the relevant data from the applicant. This would significantly reduce the data-entry burden on the HR staff and reduce errors. It will also give the HR staff a more sophisticated tool for verifying applicant information and comparing all of the applicants for a given position.

Additional solutions include using the Document Management system and workflow for collecting and distributing applications and resumes so that departments can review in a timely manner and can be notified when new applications are processed.

Also, Salary Surveys Online (Project #151) would help with the position definition and salary planning portion of the recruitment process.

Benefits of the Project:

- Improved understanding of how we fulfill new position requests and where responsibilities lie;
- Improve the capture of data, eliminate redundancy and improve efficiency in the process;
- Give HR staff more time to focus on more important pieces of the recruitment process; and
- Potential for an improved pool of applicants.

4.3.28 In-Car Mapping

What is the Project?

Add in-car mapping and automatic vehicle location (AVL) functionality to New World Mobile.

AVL is widely used in public safety to ensure the safety of officers in the field. This software will use existing GPS-enabled wireless modems to display the current locations of patrol cars to all other officers and dispatchers.

The police department has a number of brand new officers coming out of basic academy and going into the field in the next several months. Also, the number of field officers could almost double with annexation. It will take months for new officers to get familiar with the city, and if we annex, there will be a large portion of the city that no officers know. In-car mapping will provide the ability for officers (and dispatchers) to get directions from their current locations to the locations of their assigned calls. It will help them geo-verify addresses in their reports so that they can be merged into the New World Records system with minimal intervention by records staff (currently this takes a lot of time).

Both AVL and in-car mapping will be useful in pursuits when officers need to see each other's locations and be able to react quickly to assist each other.

Benefits of the Project:

Both of these will result in better response times and will allow officers to take more calls (as they won't have to spend so much time figuring out where to go and how to get there), and will enhance officer safety by providing accurate location data during an incident.

4.3.29 Mobile Device Content

What is the Project?

Optimize the new internet software to sniff for connected device (such as mobile devices, like PDAs) and display content accordingly. Either develop or work with vendor to develop custom page type(s)

Benefits of the Project:

- Better mobile accessibility to city web content

4.3.30 Hansen Upgrade

What is the Project?

Upgrade Hansen, the asset management application, from v7.7 to v8.X including the conversion of the existing Hansen data.

Benefits of the Project:

- Hansen v8 is thin-client (no software on workstation), the old version, v7.7 is fat-client
- Ability to group assets for projects, work orders, service requests, etc.
- Added GIS Functionality (Map Drawer)

- Added Custom Configuration
- Additional Management Tools (Digital Dashboard)
- Need to stay current and supported
- Thin-client software will be easier for field access and easier for IT to support.

4.3.31 Permit System Replacement

What is the Project?

Replace our existing permitting system, Advantage, due to the fact it may become unsupported at any time. Changes in the ownership of the Advantage software may, at any time, result in Advantage being “retired”. As a result, the City needs to be prepared to replace Advantage with a new and supported application.

This project also includes the migration/conversion of all, if not most, of the existing permit data into the new system.

Benefits of the Project:

The main benefit of this project is to replace an old and unsupported application with a new fully supported application. Other benefits include:

- The current system works well but may not be supported soon, need a supported system
- May of the processes used in the current system should be applicable to the new system
- Configuring the new system to work with our processes
- Opportunity to improve our permitting and licensing processes
- Opportunity to improve the quality of the data stored in the permitting system
- This project may identify the need for a separate licensing application
- May allow for easier integration between back-end system and mybuildingpermit.com.

4.3.32 NWMaps.net

What is the Project?

NWMaps is designed to be an online GIS resource available to the public both for Kirkland-specific information and to provide regional GIS data from multiple entities into a seamless whole for specific data layers.

The eCityGov Alliance Operations and Executive Boards manage the work plan for the system and the Kirkland Representative for this project is our GIS Administrator, Xiaoning Jiang.

IT and/or GIS support is primarily to provide requirements, attend meetings, and help test the system, particularly the Kirkland-specific layers. This project does need further enhancement to customize for some of the GIS layers Kirkland would like to see displayed.

Benefits of the Project:

Allows citizens to directly look up common GIS data base layers.

4.3.33 NWPProperty.net

What is the Project?

NWPProperty.net is a regional property locator services. The eCityGov Alliance Operations and Executive Boards manage the work plan for the system and the business side lead for the regional project is Ellen Miller-Wolfe.

As necessary, provide IT and/or GIS support to the project.

Benefits of the Project:

- Give people who want to locate here a single web source to search
- Includes statistics and other information in addition to available property

4.3.34 DISCIS Integration Discovery

What is the Project?

Perform discovery project to determine ability to integrate systems with AOC DISCIS system.

Some things that the court would like to do include: importing parking ticket data into DISCIS; accepting credit card payments for fines; printing from DISCIS to printers other than a dot matrix, and the ability to print to a PDF file.

Since the DISCIS system is owned by the AOC (Administrative Office the Courts), Kirkland IT's role is expected to be the technical facilitator: working with the court to determine exactly what they want or need, relaying that information to the technical staff at AOC, and implementing any solutions provided by AOC.

It must be clear to the court staff that Kirkland IT will not be able to provide the solutions to these needs directly as we do not own this system.

Benefits of the Project:

Some of the desired benefits are the elimination of duplicate data entry, more flexibility for the users of the system, and better/faster service to customers.

4.3.35 Standard Reporting Tool

What is the Project?

Improve user's access to information by upgrading current reporting tool and purchasing additional licenses. Investigate and select a Standardized Reporting Tool: Crystal Enterprise or MS SQL Reporting Services.

Phase I: Upgrade Crystal Enterprise and buy additional licenses. Train technical staff and users on current version. Encourage business users to create and request reports using the new tool and publish to a central location. Solicit requests for reports that are based on key measurements that the City wants to track for continuous improvement analysis. Evaluate whether a single reporting repository improves efficiency and access to information and the efficacy of using the reporting tool for tracking continuous improvement metrics.

Phase II: Investigate and select Enterprise reporting tool with the emphasis on a tool that is intuitive for business users. Convert all existing reports and train technical staff and users on the selected tool.

Benefits of the Project:

- End users with appropriate training will be better able to create their own reports;
- Increased access to information by staff and management;
- Less time spent maintaining skills on multiple reporting tools;
- Staff and management would have one place to go for all of their reports;
- Less IT time spent creating basic reports;
- More IT help would be available for complex reports; and
- Would prepare the enterprise for projects such as role-based dashboard and a defined continuous improvement measurement system.

4.3.36 Online court payments

What is the Project?

There is a need to allow customers to pay fines and court related fees via the Internet. The existing system (external to the City) charges very large transaction fees.

Benefits of the Project:

- Reduce Court staff time
- Improve customer service

- Increase the number of paid fines
- Improve tracking of paid fines and late fees
- Establish City-wide credit card payment policy

4.4 Infrastructure Projects Summary

4.4.1 Install additional web cams for high-use facilities

What is the Project?

Install additional web cams for high-use facilities in order to allow people the ability to determine whether or not to visit based on current occupancy. Cameras could also be used for public safety uses such as areas prone to graffiti or public disturbance trouble areas.

Benefits of the Project:

- Better citizen satisfaction
- Better security
- Better utilization of city parks
- Better visibility for Kirkland and Kirkland Parks

4.4.2 Digital Voice Recording System

What is the Project?

Evaluate, select and implement a new digital recording system to track all calls into dispatch regardless of entry point.

Benefits of the Project:

Provide a more reliable, user friendly solution to replace the existing system

4.4.3 Fire Inspection implementation

What is the Project?

Phase I: Optimize the use of the FireRMS system as it is now. This will Provide Fire the tools and knowledge necessary to schedule and track inspections.

Phase II: Implement Mobile Inspections to reduce data entry and paper form handling. This will also give us better and timelier data.

Benefits of the Project:

Better Fire Inspection scheduling and tracking to identify fire code violations to be corrected for public safety.

4.4.4 Mobile Remote Access for Field Operations

What is the Project?

Given the records number of permits being issued in the last 2-3 years, there is a related need to complete more permit related inspections. It has been identified that inspectors spend 2-3 hours of each 8 hour day at City Hall getting their daily schedule at the beginning of the day and doing data entry at the end of the day. This time would be better spent doing inspections in the field and being able to do inspection data entry in the field as inspections are completed. It would also be useful for the inspectors to have access to the tools and data that they use daily in the field.

Benefits of the Project:

- Allows inspector to complete more inspections more accurately
- Reduces the time inspectors spend at their desks when they could be in the field
- Give the inspectors the data and tools they need in the field
- Speeds inspection completion, signed off as soon as they are completed
- Easily and inexpensively scalable solution (annexation)
- Field computers can also be used as desktop computer when in the office
- Provide better customer service on-site
- Ability to print rather than write permits, correction notices and stop work orders in the field

4.4.5 Electronic archival system for all email

What is the Project

Determine email archival needs and implement system.

Benefits of the Project:

- Reduce risk to the City
- Save time and money in the event of an audit or legal request
- Automates archiving policies
- Meet legal requirements for storage of public records – we now rely on individuals to save all emails that are public records and have no backup and recovery system that works. As people

leave the City, any email they have which is public record probably does not get saved. A centralized system that stores all email would relieve individuals of this responsibility.

4.4.6 Intranet Upgrade

What is the Project?

Upgrade existing intranet software from Sharepoint Portal 2001 server to a newer version of software. During this process we will also redesign the intranet, including departmental workspaces.

We will do an inventory of existing content on KirkNet and departmental workspaces and then select content to either keep or remove. We will build KirkNet (the top level site) first; then work in a phased manner to build and bring departmental sites online. We will then migrate the selected content to the new sites

Benefits of the Project:

- Software will be more current for easier support
- More current and correct information and data on sites
- Better functionality and features in newer version (discussions, Polls, dashboards)
- Better integration with Microsoft Office
- Better productivity and worker knowledge management
- .net technology – easier to develop powerful and reusable web site features

4.4.7 Disaster Recovery Planning

What is the Project?

Develop Disaster Recovery requirements, procedures and establish off-site servers. Includes providing “hot” redundancies for critical systems like Police Dispatch and email. May include additional out-of-state backup sites for a few systems.

At this point in time we only have reasonably adequate off-site disaster recovery for the financial system. We do not have any off-site locations for other servers. Data is stored off-site at a fire station, and periodically sent to Iron Mountain for safekeeping. The most current backups are kept onsite here. If we experience a disaster that destroyed the usability of, or access to, our servers, we would have to borrow or purchase new hardware, which could take anywhere from days to weeks. We are prevented from testing a DR plan without having DR servers.

Where needed and possible, work with departments to ensure that all aspects of business continuity are addressed, including how they will operate should a system be unavailable for an extended period of time, what records and information might be needed to operate in a paper environment, and what level of staffing is required to operate in a paper or electronic environment during an actual

disaster (for example, paychecks and PO's might need to work in any disaster, but the ability to accept utility bill payments may not be required unless we enter a long period of response and recovery).

There are many case studies available about the importance of disaster recovery in light of recent natural and manmade incidents from 9/11 to Katrina.

Benefits of the Project:

Allow the City to perform well in a disaster by having key systems such as public safety dispatch, finance, GIS, and infrastructure maintenance systems operational.

4.5 Schedule

The projects in the portfolio were scheduled for implementation along a 5-year timeline. Selecting the start date for each project took into consideration several factors. These included the availability of IT Staff to manage and participate in the project, departmental priorities, and project funding status. The projects are significantly front-loaded in the time period. This is the result of the “must-do” status of a number of projects, regional partner schedule drivers, and departmental priorities. Project costs are associated to start year though actual costs will be in many cases distributed between several years. Appendix F provides a GANTT chart representing each of the projects ordered by calendar sequence. In addition, resource assignment and level of effort assumptions are embedded in the file. Project listed in the table without a cost identified indicate the project requires staff time only.

The annualized cost summaries are consistent with historic and anticipated capital improvement program (CIP) funding levels. In fact, many of the projects are currently listed in the IT CIP. These projects should be reconciled with the current CIP during the next request cycle.

EXHIBIT 23. PROJECT START DATE AND ONE-TIME COST

Project Name	Start Date	Cost
In Flight Projects		
168 DISCIS Integration Discovery	2/3/06	N/A
130 Electronic Bookings	8/28/06	\$750
172 Intranet Upgrade	9/5/06	\$19,736
165 Norcom Regional Public Safety Technology Study	9/5/06	N/A
65 CRM Project	9/5/06	\$314,600
76 Document (Records) Management	9/8/06	\$788,400
180 Storage Solution	10/2/06	N/A
136 Internal Affairs	10/16/06	\$32,513
135 Capital Budgeting Process	11/6/06	\$2,875
181 City Hall Core Network Improvements	11/13/06	\$32,000
		\$1,190,874
2007 Projects		
124/125 Electronic Ticketing and Accidents	1/1/07	\$94,285
94 Facilities Scheduling	1/8/07	\$4,000
78 Photograph Library	1/8/07	\$18,000
42 Volunteer and Commission Membership Tracking	1/8/07	\$6,480

Project Name		Start Date	Cost
134A	Fire Staff Scheduling	1/8/07	\$68,120
110	Virtual Kirkland Geospatial Model	1/8/07	\$50,000
137	Digital Voice Recording System	1/8/07	\$113,000
147	MyParksandRecreation.com	1/8/07	N/A
166	NWMaps.net	1/8/07	\$2,000
167	NWProperty.net	1/8/07	N/A
154	IFAS 7i: HR/Finance System Web-based Client	1/8/07	\$131,670
161	Mobile Remote Access for Field Operations	1/8/07	\$87,300
182	Bellevue/Kirkland Datacenter link	1/9/07	N/A
183	Automated Monitoring Solution Improvements	1/9/07	\$11,000
173	Disaster Recovery Planning	3/5/07	\$370,000
114	Create web stat reporting method and tools	4/2/07	\$1,800
142	JBRS	4/2/07	N/A
158	Fire Inspection implementation	4/2/07	\$56,518
153	MyBuildingPermit.com	5/3/07	\$32,000
105	Install additional web cams for high-use facilities	5/14/07	\$25,000
157	Recruitment Process Analysis and Application Online Implementation	6/4/07	\$84,822
85	Project Schedule Tracking	7/2/07	\$25,000
134B	Police Staff Scheduling	7/2/07	\$68,121
146	Employee Status Change Process Analysis and Automation	7/2/07	\$6,360
88	Requirements Gathering Methodology	8/13/07	\$7,500
129	WACIC Interface	9/3/07	\$69,568
151	Salary Surveys Online	9/3/07	\$79,062
159	In-Car Mapping	10/1/07	\$114,669
86	Software License Tracking	10/1/07	\$30,000
127	Pawns Downloads	10/1/07	\$10,880
184	Server Virtualization	10/30/07	\$58,000
155	Employee Provisioning Checklist	11/19/07	N/A
			\$1,625,155
2008 Projects			
170	Standard Reporting Tool	1/7/08	\$175,000
36	Regional Vendor Management	1/7/08	N/A
126	Online citizen incident reporting	1/7/08	\$21,037
22	Permit Process Mapping	1/7/08	\$20,000
51	Probation Management System	1/14/08	\$60,000
104	Refine Parks Work Order Process	6/23/08	\$23,400
169	Electronic archival system for all email	7/7/08	\$143,000
29	Receivable Integration	8/5/08	\$26,450
185	Tape Backup System Improvements	8/22/08	\$22,000
164	Permit System Replacement	10/6/08	\$500,000
186	Cisco Call Manager redundancy improvements	10/21/08	N/A
			\$990,887
2009 and Beyond Projects			
163	Hansen Upgrade	1/5/09	\$57,000

Project Name		Start Date	Cost
160	Mobile Device Content	1/5/09	\$10,000
34	Position Management	3/20/09	\$36,450
120	Hansen Workflow	3/24/09	N/A
150	Career Development Process and Automation	6/1/09	\$4,320
54	Issue Management Process	6/8/09	N/A
171	Online Court Payments	10/12/09	\$50,000
			\$157,770
			\$3,939,686

Under the current project prioritization and sequencing, IT staff are allocated project hours beyond their capacity of time set aside from their core IT responsibilities (which ranges from 25% to 50%). In situations where planned projects significantly exceed staff capacity, additional project schedule time spans were increased. This will theoretically provide IT staff additional float time within projects and enable them to more easily juggle conflicting responsibilities. The addition of an application manager is intended to provide project support – including project start-up, planning, schedule management, and closeout – to IT staff who are managing projects.

4.6 Costs

Many of the projects included in the IT Strategic Plan will require ongoing maintenance and support costs and IT service hours. In addition, ongoing hours will be required from non-IT City departments. These are summarized in Exhibit 24.

EXHIBIT 24. PROJECT COST SUMMARY

Project Number	Project Name	One-time Cost	Ongoing Cost	Ongoing Hours
APPLICATION PROJECTS				
29	Receivable Integration	\$26,450	\$3,875/yr	
36	Regional Vendor Mgmt			20 IT 40 Non-IT
42	Volunteer and Commission Membership Tracking	\$6,480		16 IT 200 Non-IT
51	Probation Management System	\$60,000	\$3,000	150 IT 0 Non-IT
65	CRM Project	\$314,600	\$50,000	260 IT 130 Non-IT
76	Document Management	\$513,000- \$788,400	\$116,000-\$135,000	.5 IT .25 Non-IT
78	Photograph library	\$18,000	\$3,600	2 hrs/mo
85	Project Schedule Tracking	\$25,000		
86	Software License Tracking	\$30,000	\$1,000	60 IT 0 Non-IT
104	Refine Parks Work Order Process	\$23,400	\$3,000/yr	
110	Virtual Kirkland Geospatial Model	\$30,000- \$50,000		40 IT 0 Non-IT
114	Create web stat reporting method and tools	\$1,800	\$460	5-10/mo IT
120	Hansen Workflow	40-50 hours		10 hrs/yr
126	Online citizen incident reporting	\$21,037	\$4,517	40 IT
127	Pawns Downloads	\$10,880	\$1,741	Police: 100- 150 hrs to use
129	WACIC Interface	\$69,568	\$6,267	
130	Electronic Bookings		\$750	40 IT
134	Staff Scheduling	\$136,241	\$20,496	40-80 IT 40-80 Police & Fire
136	Internal Affairs	\$32,513	\$6,395	40-60 IT
142	JBRS	Staff time only		40-80 IT
147	MyParksandRecreation.com			
151	Salary Surveys Online	Option 1: \$0 Option 2:\$79,062	Option 1:\$0 Option 2: \$30,355	40 IT 60 Non-IT
153	MyBuildingPermit.com	\$32,000		
154	IFAS 7i: HR/Finance System Web-based Client	\$131,670	\$14,434	104 IT 56 Non-IT
157	Recruitment Process Analysis & Application Online Implementation	\$84,822	\$15,752	260 IT 500 Non-IT
159	In-Car Mapping	\$114,669	\$13,422	
160	Mobile Device Content	Option 1: \$1-\$10,000 Option 2: \$0		100 IT

Project Number	Project Name	One-time Cost	Ongoing Cost	Ongoing Hours
163	Hansen Upgrade	\$57,000	\$30,000/yr	
164	Permit System Replacement	\$500,000	\$40,000/yr	
166	NWMaps.net	\$2,000		
167	NWProperty.net			
168	DISCIS Integration Discovery	Staff time only		
170	Standard Reporting Tool	Ph 1: \$30,000-\$50,000 Ph 2: \$30,000-\$50,000 Prof Svcs:\$75,000	Ph 1: \$7,500-\$12,500 Ph 2: \$7,500-\$12,500	
171	Online court payments	\$50,000	\$4,500/yr	
124, 125	Electronic Ticketing & Accidents	\$94,285	\$16,080	240 IT
INFRASTRUCTURE PROJECTS				
105	Install additional web cams for high-use facilities	Basic cam: \$1,500-\$3,000 Live video: \$3,800-\$10,500	\$3,500/yr	100 IT 0 Non-IT
137	Digital Voice Recording System	\$113,000	\$12,960	
158	Fire Inspection implementation	Software:\$40,518.50 Fire RMS Optimization:\$16,000	Fire RMS:\$8,055.50 Training:\$4,000	Mobile: 40 IT; 20 Fire Other: 16-24 IT; 60 Conference attendee; 16-24 training for each
161	Mobile Remote Access for Field Operations	\$87,300	\$10,860/yr	
169	Electronic archival system for all email	\$143,000	\$15,000	10 IT 5 Non-IT
172	Intranet Upgrade	\$16,736-\$19,736	\$3,315	400 IT 100 Non-IT
173	Disaster Recovery Planning	\$370,000	\$153,000	100 IT 100 Non-IT
STAFFING AND ORGANIZATION PROJECTS				
22	Permit Process Mapping	\$20,000		
34	Position Management	\$36,450		50 IT 500 Non-IT
46	Mobile Remote Access Strategy	Staff costs + some GIS consultant costs of approx 40 hrs		
54	Issue Management Process			10 IT 0 Non-IT
88	Requirements Gathering Methodology	\$7,500		
94	Facilities Scheduling	\$4,000		
135	Capital Budgeting Process	\$2,875	\$173	16 IT 520 Non-IT
146	Employee Status Change Process Analysis & Automation	\$6,360	\$180	64 IT 16 Non-IT

Project Number	Project Name	One-time Cost	Ongoing Cost	Ongoing Hours
148	HR Forms Workflow			20 IT 0 Non-IT
150	Career Development Process & Automation	\$4,320		20 IT 208 Non-IT
155	Employee Provisioning Checklist			16 IT 240 Non-IT
165	Norcom Regional Public Safety Technology Study	\$100,000		